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For the opportunities that have been given to all to increase our material worth, let us be duly thankful.

For the opportunities that have been given, and will continue, to all to increase our moral worth—to help our fellow men—let us be no less thankful.

GENERAL MANUFACTURES SCHEDULE.

For the Thirteenth Decennial Census.

The general schedule which will be used in the Federal Census of Manufacturers for the calendar year 1909 has been formulated, and about 700,000 printed copies have been ordered by Census Director E. Dana Durand.

The schedule is in the form of a 4-page folder, about 9 by 11½ inches in size. It is smaller and simpler than the ones upon which the 1900 and 1905 censuses of manufactures were taken. It has less than half as many spaces for entries as the others. The tendency to overburden the schedule with inquiries seems to have been prevented.

The schedule was prepared mainly by the Director, Assistant Director William F. Willoughby, and Mr. William M. Steuart, chief statistician for manufactures. Advising with them on the subject were the economic and statistical experts forming the advisory board of special agents.

Before the adoption by the Director, it was submitted to well-known business men, representing boards of trade, chambers of commerce, manufacturers' associations, and also to individual authorities in the large manufacturing cities. The schedule has met with quite general approval of those to whom submitted.

The Director was authorized by Congress to determine the form and subdivision of inquiries necessary to secure the information required for statistical purposes. Throughout the preparation of the schedule simplicity of inquiry has been sought, with the necessary completeness which will permit correct interpretation.

Advantage has been taken of the experience of the Bureau at the census of 1900, and it is believed that the application of the blank will result in a complete and satisfactory census.

There are in the new general schedule thirteen principal questions, with their subdivisions. This is the same number as in the general schedule for 1905. There are, however, important differences between the two schedules. These comprise, in the 1909 schedule, the new questions authorized by Congress, the elimination of former queries to which it is believed to be impossible to obtain accurate replies, and also the simplification of others by their separation or combination in other forms.

One of the subdivisions of the question relating to power employed for manufacturing purposes calls for the name of the stream or lake from which water is obtained to generate power, whether direct or electric. This information will furnish a first step toward a census of the country's water-power plants and operations should Congress specifically authorize such a census in the future.

Another new question involves the quantity of fuel used, whether anthracite coal, bituminous coal, coke, wood, oil, gas, or other kind. This is expected to elicit replies affording considerable data on the fuel-conservation question.

The thirteen principal questions are, briefly: First a description of the establishment; second, time in operation and hours worked; third, capital invested; fourth, salaried employees; fifth, wage-earners, including pieceworkers, on the pay roll December 15, 1909, distinguishing men, women and children; sixth, wage-earners, including pieceworkers, employed on the 15th day of each month, without distinction of sex or age; seventh, salary and wage payments; eighth, materials, mill supplies, and fuel; ninth, miscellaneous expenses; tenth, products; eleventh, power; twelfth, fuel; and thirteenth, remarks.

LEMON OIL.

Two years ago the detention of a large quantity of Italian lemon oil at the port of New York caused such a scarcity in the domestic market that the price of oil went skyward. The detention was due to a belief on the part of the United States Department of Agriculture that the oil had been adulterated, and it was not until a representative of the Messina Chamber of Commerce came here and endeavored to show that the presence of pinene in lemon oil was natural, that the Government released those shipments showing no abnormal characteristics.

In order to obtain authoritative information at first hand Mr. E. M. Chace, chief of the Food Technology Laboratory, was sent to Sicily, and his report has been published as Bulletin No. 46 of the Bureau of Chemistry. We publish part of this bulletin in this issue and will conclude it in coming issues.

THE WHITE CROSS CONGRESS.

The second International Congress for the Repression of Adulteration was held in Paris, October 17th to 23rd, inclusive. That portion of the program of interest to users of essential oils was assigned to Section III., of which Professor Perrot, of the Paris Superior School of Pharmacy, is chairman. After a thorough discussion of the scientific and commercial elements involved the following results were agreed to:

Anethol.—Point of solidification accurately fixed.
Aniseed Oil.—Badiane oil not to be substituted.
Bergamot Oil.—30 per cent. minimum for esters.
Chinese Cinnamon Oil.—70 per cent. minimum for cinnamic aldehyde.
Lemon Oil.—Addition of water-bath residue to characteristics already proposed.
Wintergreen Oil.—*Betula lenta* as well as *B. procumbens* may be described as natural wintergreen.
Lavender Oil.—28 per cent. minimum of esters.
Neroli Oil.—Saponification number added to standard.
Rose, Otto.—Solidification point fixed at 17 degs. to 23 degs. C.
Rue Oil.—Minimum solidification point, 7 degs. C.
Savin Oil.—Saponification number added and solubility in alcohol fixed.
Sandalwood Oil.—Minimum rotation for 100 mm. —10 degs. It is understood that such a slight deviation is exceptional; but it may be met with, especially in oils of sesquiterpene character. In this case, as in all others, the Congress kept in view that it was desirable to avoid any chance of pure oils, really produced by distillation of the wood of *Santalum album*, being stigmatized as adulterated.
Thyme Oil.—The maximum of phenols was fixed at 65 per cent., and solubility in alcohol was added as a characteristic.

Two resolutions were unanimously voted, viz.:

1. The denomination sandalwood oil is only applicable to oil obtained from *Santalum album*, and ought not to be used to designate the oil of *Amyris balsamifera*, incorrectly termed in the trade "West Indian Sandalwood Oil"
2. The application of the term "essential oils" to definite chemical products, whether extracted from essential oils or synthetically prepared, shall be prohibited.

A POPULAR HAIR TONIC.

Mr. Frederich W. E. Müller, of Chicago, Ill., is destined to become one of the blessed saints of the age. We are led to make this prophecy by the grant of a United States patent to Mr. Müller on November 9, 1909, for a hair tonic, of the following composition:

A hair tonic, consisting of pure water 10 per cent., an extract of ripe black currants, 25 per cent., granulated sugar 5 per cent., best corn whisky 40 per cent., and port wine 20 per cent. (Patent No. 939,431.)

Now, as we have the best interests of the perfumery trade at heart we felt impelled to experiment with this formula, and persuaded a manufacturer of such high-grade toilet articles as blackberry brandy, Jamaica rum, Martini cocktails, gin fizz, whisky sour, etc., to make up a sample quart.

Being unaware of the proper method of application of this tonic, and the quantity to be used, we induced a friend to make a trial. He commenced by filling a small glass and examining the liquid carefully in the light. The smile that o'erspread his features was evidently one of delight at the approaching solution of his hair troubles—for it should be said that his pate is nearly bald. His next move was to raise the glass to his nose to inhale the fragrant odor and then to take a generous mouthful.

As he had been a long sufferer of dandruff on his palate he allowed the liquid to trickle down his throat slowly, and as his smile grew broader we were convinced that the tonic had already begun its good work.

As we stated before, the patent does not disclose directions for use, so our friend, to insure proper treatment repeated the trial several times, and soon the few hairs that adorned his head began to curl.

But why continue this detail? Suffice it to say that our friend would content himself with no less than a pint of the precious tonic, and has laid in a generous supply which he has decided to use morning and evening in order to effect a radical cure of the falling hair in his esophagus, baldness of the stomach, and similar troubles known only to those afflicted with a perennial thirst.

Should any of our readers repeat this experiment we should be pleased to have a detailed report—written, preferably, several days later, to insure clarity of diction.

UNIFORM FOOD AND DRUG LAWS AND REGULATIONS.

Probably the greatest difficulty that extract manufacturers have to contend with, so far as National and State regulations are concerned, is the woeful lack of uniformity that prevails. To the correction of this evil the best efforts of the Flavoring Extract Manufacturers' Association should be directed; and we have no doubt that persistent work combined with judicious publicity will produce good results.

To give some idea of the arbitrary and irrational stand taken by certain officials we quote the correspondence we have had with the Secretary to The State Pharmaceutical Examining Board of Pennsylvania, which Board is charged with the enforcement of the Pennsylvania Drugs Act of May 8, 1909. On Oct. 21st we wrote as follows:

> We have carefully read the Pure Food and Drug Act, approved May, 1909, and note in section 3 that official preparations of peppermint and ginger must be of official strength under all circumstances. How will this provision be construed in regard to food flavoring extracts of peppermint and ginger? Those extracts come clearly within the provision of section 2 of the Pure Food Act approved May 13, 1909, and as there are no standards of strength for foods [in Pennsylvania], it seems plain to us that those extracts, when intended for use in foods, are not subject to the aforementioned provisions of the drug act.

The following reply was received:

> In reply to your letter of the 21st inst. I beg to advise that the Regulation adopted by this Board, having reference to the article named in your letter is as follows:—
>
> REGULATION 4.—STANDARDS FOR DRUGS.
>
> (B) Official preparations of OPIUM, IODINE, PEPPERMINT, CAMPHOR, GINGER, AND ETHYL NITRITE can be sold, ONLY, when they conform absolutely to the standards of strength, quality or purity as determined by the test and formula laid down in the United States Pharmacopœia, National Formulary or American Homœpathic Pharmacopœia, *regardless of any statement on the label respecting their character.*
>
> I may further advise that it is the intent of the Pennsylvania Drugs Act to restrict the sale of what are known as "commonly used medicines," to products of full standard strength and quality of the United States Pharmacopœia. The preparations represented by Extracts of Peppermint and Ginger are essentially medicinal products, and while it may be possible that occasionally these are sold for flavoring purposes, the experience of this Board in the past has been that they were sold as substitutes for the medicinal preparations which their names implied.
>
> I think you are in error in stating "there are no standards of strength for foods." I find that Circular No. 19, of the United States Department of Agriculture, contains a large number of food standards, and among them I find the following:—
>
> "Ginger Extract is the flavoring extract prepared from Ginger and contains in each one hundred cubic centimeters, the alcohol-soluble matters from not less than twenty grams of Ginger."
>
> Therefore, ginger extract manufactured and sold for interstate commerce, in accordance with United States standard, would meet the requirements of the Pennsylvania Drugs Act, as the standard recognized in it is the same. I may further state that U. S. P. standards for official preparations of these products have been the requirement in this State since 1897. This Board has prosecuted successfully a large number of dealers who sold extract of peppermint labeled for flavoring purposes but purchased by the consumer for medicinal use. In all these cases we have regarded preparations, so labeled, as imitations of the official article and were sustained in this by an opinion rendered to this Board by ex-Attorney General of this Commonwealth, Hampton L. Carson.
>
> Whatever view one may take regarding the classification of these products as either drugs or foods, it will appear from this that dealers will take great risks under our law in selling a preparation as a flavor, which in most cases is purchased and used as a medicine.

We then wrote:

> There is one statement in your letter of Oct. 22nd that is of great interest to us, and that is the following: "I may further advise that it is the intent of the Pennsylvania Drugs Act to restrict the sale of what are known as 'commonly used medicines,' to products of full standard strength and quality of the U. S. P. The preparations represented by Extracts of Peppermint and Ginger are essentially medicinal products, and while it may be possible that occasionally these are sold for flavoring purposes, the experience of this Board in the past has been that they were sold as substitutes for the medicinal preparations which their names implied."
>
> In view of the fact that extracts of peppermint and ginger are, as you admit, sold for food flavoring purposes, we fail to see where your Board derives its authority arbitrarily to classify these extracts solely as drug products.
>
> It is our opinion that this attitude on the part of the Board will not be sustained by the courts, and if we were manufacturers of such extracts sold for food flavoring purposes we would most certainly contest your decision.

To which this answer came, dated Nov. 15th:

> I have your letter of the 12th inst. at hand to-day. In reply I beg to state that I have submitted my correspondence with you to the members of this Board and the views expressed therein were duly confirmed.

The final chapter to this story will be written in the Courts for we understand that a manufacturer of extracts will test the regulations. Although prophecy is a hazardous business, we feel safe in venturing the opinion that no Court will require *food* products to conform to *drug* standards. The Pennsylvania board very artfully quotes the standard in U. S. Circular No. 19 in the case of ginger extract just because that particular standard happens to conform to the U. S. P., but in regard to peppermint, the standard in Circular No. 19 is anathema because it calls for only 3 per cent. of oil. Evidently the Board has learned the difficult art of blowing hot and cold with the same breath.

Although the legality of these standards is questioned in the Federal courts it is absolutely irrational for the Pennsylvania Board to quote them in the case of ginger and to ignore them in the case of peppermint. Furthermore, a food is a food always, while a drug is such only when "intended to be used for the cure, mitigation, or prevention of disease."

IN THE FEDERAL DOMAIN.

The administration of the Federal law has been harshly criticized from many points of view; but the trouble with most of the critics is that they suggest no substitute that gives promise of improvement. Perhaps one of the best suggestions yet made comes to us from a modest gentleman who is recognized as a chemist of front rank, a business man of ability, with a training in food law work. He says:

"It seems to me that a subject as comprehensive as the Pure Food Law and its standards should be the work of a special Pure Food Commission appointed by the President, rather than a Board subsidiary to a particular department. From time to time food standards are bound to change, due on one hand to the advancement of science and on the other hand to the new foods put on the market, and in order to have standards to meet the new conditions, as well as to have standards to cover the present conditions, it is surely necessary that a competent Pure Food Commission be designated to consider and study the problems to be met.

"This Commission should consist of broad gauged men who from their varied experience in life are in a position to judge these matters in a way to protect both the consumer and the manufacturer. My idea of such a Commission would be as follows:

"That it should consist of five members, one lawyer, two chemists and two retired business men.

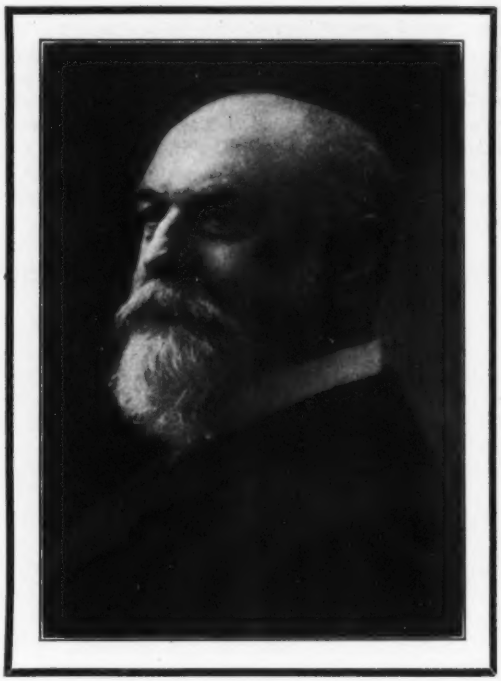
"The lawyer should be a man of large experience, not only with the legal questions involved, but with conditions affecting the welfare of the people. His experience should not be limited to one narrow phase of law.

"The chemists should be not only analytical chemists but men who have had experience in research and from their position as professor in some university have had experience in the various branches of chemistry.

"The business men should be men who from the very nature of their business have had a cosmopolitan experience. They should not necessarily have had a scientific training, but of course if that has been combined in their other experience so much the better.

"A Commission of this sort could not be obtained unless the Government were willing to pay salaries commensurate therewith, and men serving on this Board should be paid not less than $10,000 a year, together with an allowance for private secretary, and further funds to the Commission for carrying out their work, such as employing experts in any line on which there should be a question regarding the standads.

"The Commission should make its report to the President or to any of the three departments designated by Congress for the supervision of the Pure Food laws."



Mr. Adolph Spiehler died Nov. 3, at his home, 580 Averill avenue, Rochester, N. Y.

He was born in Lomersheim, Bavaria, Germany, March 3, 1838, and came to this country in 1865, arriving on the 10th of August, and a month later went to Rochester. There he entered the employ of D. Mitchell & Co., manufacturing chemists, and a few years later formed the American Chemical Company, with Mr. Charles B. Angel.

In 1876 he left that corporation and established his own firm for the manufacture of perfumes, toilet preparations, etc. The business was incorporated a few months ago on account of Mr. Spiehler's failing health, and the management of the corporation has been in the hands of two sons, Adolph M., and Oscar B.

Mr. Spiehler was married, at the age of 22 years, to Amanda Jacobs, who died in 1899, at the age of 49 years. Five children were born, of whom four survive—Adolph M., Oscar B., Clarence H., and Miss Florence. A son, Harry, died in 1881, at the tender age of 2½ years.

Mr. Spiehler was a director in the Merchants' National Bank and the Union Trust Company, and was interested in several industrial concerns. He was a member of the Rochester Whist Club, and had served as treasurer of the Excise Board of the city of Rochester.

The funeral took place from his late residence on Saturday afternoon, Nov. 6, at 2.30 o'clock, and the interment was made in Mt. Hope Cemetery. Services were conducted by Rev. J. F. W. Helankamp, of Salem Church (Dutch Reformed). A male quartette rendered very feelingly Mr. Spiehler's favorite hymns—"Lead Kindly Light," "One Sweetly Solemn Thought" and Gathering Home."

OTTO OF ROSE

By ERNEST J. PARRY

It is a well recognized fact by all having intimate knowledge of the conditions in the trade of otto of rose, that adulteration of this exquisite essential oil is being practised today on a far larger scale than it has been for the past 10 years or more.

The causes of this are not far to seek. In the first place, a certain amount of sophistication is practised by some of the peasant distillers, usually very poor; many of them cannot resist the temptation of adding a small amount of foreign matter, which, in spite of all Bulgarian legislation, is easily purchased from traveling peddlers in quantities of from 4 ounces and upwards. Secondly, today there are over 40 firms exporting otto of rose from Bulgaria, as against a dozen or so of ten years ago, and the keen competition among them stimulates adulteration. Many of these firms speculate in otto, and when the market is against them, they cannot bear to face a loss, so that they recoup themselves by adulterating. But perhaps the greatest incentive of all to adulteration today is the following: Up till ten or twelve years ago adulteration of otto of rose was quite common in Bulgaria; but the adulterant used was almost invariably oil of geranium, usually the so-called Turkish geranium oil (palmarosa oil). An expert will easily detect this, and further after an otto mixed with this coarse adulterant has stood for six months, it will be found that the delicate odor is almost entirely spoiled by the geranium, and the most untrained nose can then detect the adulteration.

As a number of chemists of repute began carefully to examine the question, the knowledge of the chemistry of otto of rose became more exact, and adulteration became more and more difficult; but there exists, unfortunately, a class of chemists who are a disgrace to science, and to their efforts otto of rose, after a short region of purity again began to be grossly adulterated.

These chemists make it their nefarious business to keep pace with the honest analyst, and try to prepare mixtures which shall have characters as nearly identical with those of genuine otto of rose as possible, in the hope of deceiving the analyst when he examines the sample. With this object, mixtures of pure geraniol, citronellol, and other bodies are made, often with the addition of solid matter to resemble the stearoptine. Until a couple of years ago, a few per cent. of ethyl alcohol were added, since the specific gravity and refractive index of such mixtures were usually too high. Further, the addition of a little alcohol raises the apparent melting point of otto of rose, for the so-called melting point of otto of rose is not a true melting point at all. It is merely the temperature at which the liquid solvent portion of the otto can dissolve the stearoptine, and as paraffine hydrocarbons are less soluble in alcohol than in geraniol, the addition of a little of the former raises the temperature at which solution takes place.

Two years ago I showed that normal otto of rose had a refractive index at 25 degs. Cent. of 1.4610 to 1.4645, and that if alcohol were present it could be easily removed by a single washing with warm water. The oil is separated and the refractive index again taken. The refractive index of alcohol, is, of course, very low, and if alcohol were present this figure is raised when taken on the washed otto. Normal otto of rose, will not show a figure more than 0.0015, rarely 0.0020 after washing, over the original otto. Any sample showing a greater difference than this amount certainly contains alcohol. Since I showed this the use of alcohol as an adulterant has nearly disappeared, and today mixtures of pure chemical bodies extracted from other oils, or manufactured synthetically are almost entirely employed. As an indication of the enormous amount of adulterated otto of rose, I find that of the last 100 samples submitted to me in the ordinary way for analysis, 83 were adulterated. I have selected at hazard the following 12 of the latter samples, the figures of which are as follows:

Specific Gravity at 30°	Rotation 100 mm.	Ref. Index at 25°	Ref. Index washed	Saponification No.	Geraniol	Citronellol
0.852	2° 20′	1.4580	1.4660	10.5	56%	24%
0.861	2° 40′	1.4640	1.4679	9.0	58%	21.5%
0.858	2° 30′	1.4615	1.4659	8.5	57%	24%
0.862	2° 45′	1.4608	1.4655	9.5	54%	27%
0.867	2° 40′	1.4680	1.4695	9.5	57%	25%
0.860	3°	1.4620	1.4668	8.5	58%	22%
0.850	2°	1.4560	1.4625	7.5	55%	24%
0.849	2° 10′	1.4559	1.4645	9.2	53%	26%
0.865	3°	1.4681	1.4700	11.0	57%	22%
0.862	2° 30′	1.4660	1.4705	10.5	57%	23%
0.880	2°	1.4750	1.4760	11.0	59%	24%
0.871	2° 50′	1.4680	1.4715	10.0	59%	22%

I cannot refrain from pointing out that a large number of these samples were dishonestly offered as guaranteed to pass my analysis, while I had never seen the contents of the coppers, and in some of the cases had never heard of the brand of otto. No guarantee based on any one's analysis is of the slightest value unless it is clear to the purchaser that the contents of the coppers actually delivered have been analyzed—preferably after delivery.

Co-Operative Soap Making.—The Scottish Co-Operative Wholesale Society has a soap works at Grangemouth, of which Mr. H. C. Green is the manager. During the last half of 1908 the production transferred therefrom to other departments for sale totalled £41,768 as compared with £42,537 in the corresponding period of 1907. The decrease for the whole year was £14,433. The profit for the last half of the year was £5,492. Included in the expenses of the various productive departments for the past six months was £242 for oil and tallow.

SAPONIFICATION*

On the well-known and much used methods of saponification by means of alkalies (in soap making), and by means of water, lime, acids, etc., (in the manufacture of fatty acids for candle making, etc.), much experimental work has been carried out with a view to improving the processes in one way or another. We will consider briefly a few of these attempts. Perrelet, in Patent 15,586, 1903, forces the fatty matter through a nozzle into a mixing apparatus, where it meets the substances (steam, milk of lime, or acids) for decomposing the fat whilst being continuously highly heated, and the mixture then passes to a tank without coming into contact with any undecomposed fat. It is claimed that this process possesses advantages over the old autoclave process, as it is a continuous one. The same worker and K. Becker protected another process by German Patent 155,542, in which saponification is brought about by causing currents of strongly heated and atomised fat and reagent (steam, milk of lime, alkalies, etc.) to impinge together in a direct line, thus enabling the particles to strike one another and become very intimately mixed. In consequence of this intimacy of mixture and the smallness of the particles, decomposition of the fat is almost complete at once. The mixture is passed through a series of steam heated coils, where the saponification completes itself, and the reaction mixture is then run to settling tanks in order that the "sweet water," etc., may settle out.

P. A. Barbe, F. Garelli, and G. de Paoli, Fr. Pat. 372,341, propose to use ammonia in aqueous solution as the saponifying agent. The oils and fats are heated in an autoclave with aqueous ammonia under pressure varying with circumstances. After separation of the glycerine the ammonium soaps may be gradually hydrolysed by boiling with water and a current of steam, so as to obtain the free fatty acids and recover the ammonia. They also state that the ammonium soaps may be converted into sodium or potassium soaps by double decomposition with a solution of potassium or sodium chloride and sulphate. In a later patent claim is made for a special apparatus in which the various operations of saponification with ammonia, separation of solid and liquid fatty acids, conversion of the latter into solid products (hydroxystearic acids, etc.), preparation of potassium or sodium soaps from the ammonium soaps and recovery of the ammonia may be carried out in a continuous cycle. O. Liebreich proposes to use aromatic bases as saponifying agents. The fats or oils are heated with aromatic bases, the glycerine is removed from the acidyl derivations which are formed, and the latter are then decomposed by sulphuric acid. J. Harvey and E. T. B. Simpson (Pat. 26,917) propose to assist saponification by the aid of an electric current.. The fats or oils are subjected in a closed vessel to the simultaneous action of steam under pressure and an electric current. This process is said to increase the rate of hydrolysis of the glycerides and to produce purer products and a larger yield of glycerine. The electric current is derived from an exterior source or by means of galvanic action produced by coupling together plates of copper and zinc completely or partly immersed in the contents of the vessel. It is probable that the acceleration of the process of saponification obtained by using the above method is due to the action of free hydroxyl and hydrogen ions, these ions being set free by the action of the electric current on the water (steam) present.

O. Mannig (Ger. Pat. 160,111) saponifies oils and fats by projecting steam under a pressure of 8-10 atmospheres against the underside of a plate or baffle mounted in a closed vessel. The neutral fat or oil is forced into the vessel under strong pressure, and on striking against the upper side of the baffle is converted into a spray, which becomes intimately mixed with the steam rising round the edges of the baffle plate. It is claimed that by this process the hydrolysis of the fat is effected in so short a time that the fatty acids do not become discolored.

Although much work has been done on the subject of saponification by means of enzymes, technically, the results cannot be considered a very great success. The enzymes are a class of unorganized ferments which have the power of resolving stored up chemical tension, and those enzymes which are able to decompose or hydrolyse fats and oils are known as lipolytic ferments. These ferments also go by the name of lipases or steapsins.

The action of ferments on fats was first observed by Eberle during an investigation on the pancreas. This subject was more fully investigated by Claud Bernard, and from these researches the idea of the commercial decomposition of fats and oils by means of enzymes has no doubt arisen. The ferments used in the fat and oil industry are of vegetable origin, and the class name for these ferments is—Lipolytic vegetable ferments. Muntz was the first to establish the presence of the fat decomposing enzyme in seeds during their germination, and later these results were confirmed by Schutzemberger. By extraction with glycerine or sodium chloride solution, green obtained from the seeds of Ricinus communis (castor oil) enzyme solutions, which were endowed with the power of hydrolysing castor oil at a temperature of about 40 deg. C. (Proc. Roy. Socy., xlviii.; 370; 1890). Since this date various workers have found lipolytic ferments in the germinating seeds of other plants. It is interesting to note that many moulds are capable of splitting up glycerides owing to the presence of a lipolytic ferment. Some micro-organisms also are capable of producing fat splitting ferments. In practice the enzyme obtained from the castor oil seed is chiefly used.

The working out of the "Fermentation" or "Enzyme" process of saponification of oils and fats is due principally to the labors of E. Hoyer, Wilhelm Connstein, and H. Wartenberg, and the Vereinigte Chemische Fabriken of Charlottenburg (Berlin) appear to be the first to use the

*Concluded from October issue.

process on the manufacturing scale. The details of this process have been described in this journal already; therefore, suffice it to say that it consists in mixing 100 parts of the oil or fat with approximately 6.5 parts of crushed castor seed, 50 to 60 parts of water, and 0.25 to 0.3 parts of acetic acid, and maintaining the temperature of the mixture between 70 deg. and 85 deg. Fah. The addition of the acetic acid is found materially to assist the action. Manganous sulphate has been used by some as an accelerator. Although it is not necessary to remove the hulls or husks of the castor seed, some prefer to do so. It is essential that the reaction mixture should be well emulsified.

Investigators have not been idle on the subject of enzyme hydrolysis, and a brief account of some of their work will not be without interest. It was thought that a small percentage of acid was required in the emulsion to accelerate the hydrolysis, but E. Lombard has found that a small portion of a neutral ester of low molecular weight will produce the same result. He found that an emulsion of an oil with one part of ethyl acetate in 10,000 decomposed as completely on treatment with crushed castor seeds and pure water as when acidified water is used under the same conditions with the oil alone. M. Nicloux and E. Urlain conclude that the presence of acids in the oils to be hydrolysed cause irregularities in the enzymic process. They propose to remove the acid either by washing the oils with acidulated and then pure water, or by neutralizing the free acids with sodium carbonate and removing the soap. This treatment is said to greatly increase the yield of fatty acids within a given time.

According to H. E. Armstrong, in the saponification of oils and fats by the enzyme of castor oil seeds, little or no action takes place unless an acid is present. He finds that any acid is effective provided a sufficient amount be used, but different acids in equivalent quantities do not have equal effects, and it is probable that the strength of the acid is a factor in the action. It seems that the hydrolytic powers of the lipase of castor seed is specific for the glycerides of the higher fatty acids; it is almost without action on ethyl butyrate acetin, the dimethyl esters of tartaric and racemic acids, or on ethyl mandelate. The latter ester is said to be readily attacked by animal lipase. Later, Armstrong found that ricinus lipase, in the form of the air dried residue, obtained after the extracton of the oil from the crushed castor seed by means of ether, gradually hydrolyses ethyl butyrate.

E. Urbain claims the use of amino-acids as stimulating agents in the hydrolysing action of lipases upon fatty oils, and he states that, with this addition, 0.025 per cent. of the dry enzyme agent is sufficient for the saponification of the oil on a manufacturing scale.

Hoyer advocates the use of acids, or salts such as manganous sulphate, to stimulate enzymic action. This worker has also made attempts to isolate the lipase of castor seeds. In the form of an emulsion it can be separated by treating the crushed seed with a solvent for oils. The turbid product, which is very active, is termed "ferment oil" by Hoyer. He recommends the use of castor seed extract in the place of the crushed seeds. By using this extract only about 10 per cent. of the albuminoids contained in the seeds are brought into contact with the oil or fat to be decomposed; the middle layer between the fatty acids and the glycerine solution is reduced in quantity, and the glycerine solution is purer.

M. Nicloux finds that cytoplasm or cell protolasm, a protein substance called cytoplastin, alone can hydrolyse fats, acting as an enzyme and following the laws of enzyme action; its activity is considerable. This worker considers that this active substance, which is destroyed by water so soon as it is no longer protected by fats, is not an enzyme, and he terms it lipaseidine.

According to H. M. Dawson, the behavior of enzymes in chemical change appears to correspond with the properties which characterize a catalytic agent. The phenomena of enzymic action are undoubtedly regulated according to the law of mass action, but owing to complicating factors, the cases are not of the simplest order. It appears that the enzyme combines with the substance on which it acts to form an intermediate product which then splits up. The phenomenon of hydrolysis by enzymes may be regarded as being effective by hydrogen ions, the enzyme forming a combination with the initial substance more sensitive to the action of these ions than the substance itself.

The hydrolysis of fats by the aid of bacteria is at the present moment only of scientific interest, and whether at a future date this method of decomposing fats will be used, it is very difficult to say. It appears that the higher orders of bacteria such as the moulds, have the greatest fat splitting powers. Some observers have expressed the view that fats are only decomposed by micro-organisms that require nitrogenous food, but O. Rahn has come to the conclusion, from his experiments, that the decomposition must be effected by micro-organisms that require very little nitrogen Cultures in mineral nutrients fluid with fat, prepared by this worker, showed material decomposition of the fat when placed under suitable conditions. He found that the penicillia had a pronounced action upon fats, and also a certain species of bacteria, while another species of mould and of bacteria had very little action. Physiological chemists attribute part of the breaking up of fats in intestinal digestion to certain bacteria.

The hydrolysis of oils and fats by catalytic agents have also received the attention of chemists, and the now well-known Twitchell process is an example of this method of saponification. The catalytic agent in this process is a mixture of sulphonic acids of fatty acid radicals combined with aromatic radicals. A typical member of this series is naphthalenestearo-sulphonic acid. As much has been written about this process of late, it is quite unnecessary to give a description of it in this article. In the hands of the writer this process has given good results.

WHY THIS ISSUE IS LATE.

Explanations, as a rule, do not explain, but when we say that the elements were responsible for a few days' delay in the execution of our covers, we simply give the facts. Lithographic work of this character, that is printed in 14 colors and then embossed, requires the height of skill; and the only circumstance that will permit adherence to a schedule is clear, dry weather. Unfortunately, we were not so favored this month, but we nevertheless give thanks for the return of sunshine.

THE OCCURRENCE OF PINENE IN LEMON OIL

By E. M. CHACE

INTRODUCTION.

In the winter and spring of 1907-8 extensive investigations were made by this Bureau in regard to the constituents of certain lemon oils imported into the United States from Sicily. The investigations made by the Bureau at that time led us to believe that the lemon oils referred to were not pure, but were adulterated either by the addition of turpentine or by some manipulation in the method of manufacture. At that time the importers made strong representations to the Bureau that the oils were absolutely genuine. They even went to the trouble and expense of sending a chemist from Messina, who made several visits to our laboratory and collaborated with our chemist and gave us the benefit of his skill. It was decided in order to settle the matter to send Mr. E. M. Chace to Sicily to investigate the method of handling the oil. Mr. Chace accordingly spent several months there making investigations and brought home samples which he could certify to be pure lemon oil. The results of his investigations fully sustain the original contentions of this Bureau.

I believe that the publication of the results of this investigation will be of great benefit not only to the people of the United States but to those of other countries importing or manufacturing lemon oil. I recommend that these results be published as Circular No. 46, Bureau of Chemistry.

Respectfully,

H. W. WILEY,
Chief of Bureau.

Approved:

W. M. HAYS,
Acting Secretary of Agriculture.

WASHINGTON, D. C., September 15, 1909.

In 1907, in the enforcement of the food and drugs act of June 30, 1906, this Bureau was making examinations of all consignments of lemon oil offered for importation at the custom-houses throughout the United States. Nothing unusual had been observed in these examinations until May of that year, when certain lots of oil were offered for entry at New York which contained substantial amounts of pinene and showed greatly abnormal physical constants. The Board of Food and Drug Inspection detained the shipments in question and requested the importers to show reason why they should not be reshipped on the ground of adulteration.

A preliminary hearing was held in New York in July and a further one requested by the importers before the Board of Food and Drug Inspection at Washington. At the latter the testimony of an Italian chemist was offered on their behalf, the question being mainly whether or not the quantity of pinene found in the oils under discussion could occur in normal oils. The expert from abroad testified that he was an inspector attached to the Chamber of Commerce at Messina, Italy, and that it was his duty, in a general way, to inspect and supervise the manufacture of lemon oil; that he was thoroughly familiar with the situation with reference to the adulteration of oil and had made a study of the question of the presence of pinene in lemon oil for the past six or seven years. Pinene, according to his testimony, occurred in varying quantities, sometimes not being detectable by ordinary methods, at other times being present to such an extent as to be readily detected. He had examined much of the oil at Messina that year and had found pinene in almost all of it. He further stated that distilled oils entered into the final product exported from Messina to the extent of 3 or 4 per cent. It contained more pinene than hand-pressed oil, but would vary the total pinene content of the mixed oils but little. Other testimony by local chemists, and from literature, was offered to prove that pinene in considerable quantities was a normal constituent of lemon oil.

On behalf of this Bureau it was contended that while pinene was perhaps a normal constituent it did not occur in sufficient quantities to be detectable by methods using only ordinary means of distillation; that wherever it had been reported it had been found only after repeated distillation with special forms of apparatus, and that for some time there had been considerable discussion among experts as to whether or not it ever occurred; that besides the presence of pinene in these oils many of them were otherwise abnormal. These consignments were confined to five importers; in fact, by far the larger part of them to one. The character of the oils had shown, during these months, a marked change; up to and including July 26 they had exhibited various other abnormalities aside from the presence of pinene. After that time, however, the physical constants became more or less normal and the amount of pinene found very much less, although considerable traces were always present.

A second hearing was later given by the Board of Food and Drug Inspection, at which the Secretary of Agriculture was present, and the importers then requested that such of the importations as were held merely because they contained pinene should be released and that the whole question be investigated by the Department at the place of production. The Board finally decided to release those oils which were not greatly abnormal and to send a representative of the Department to Sicily to investigate the conditions there during the season of 1907-8. The writer went to the island of Sicily under instructions from the Chief of the Bureau of Chemistry for the purpose of making an investigation of the methods of production of essential oils and to collect authentic samples from the several districts from which data could be derived on which to base future conclusions.

THE LEMON-PRODUCING DISTRICTS.

The island of Sicily contains five, more or less, distinct lemon-producing districts, and there is also a small area on the adjacent mainland in Italy where they are grown. The lemon belt in Sicily lies along the northern and southern coast lines, never extending inland for any great distance. The most important section lies at the foothills of Mount Etna, extending from Catania on the south to Giardini on the north, and will be called the Etna district. The second district of importance is a continuation of the first, extending from Giardini on the south to Messina on the north, and is named from the latter city. Palermo, the largest city of Sicily, is the center of the third district and gives it its name. The region begins on the east at Ficarazzi and extends westward to Partinico, including the valley of the Congo D'Oro. The fourth, or Syracuse, district lies on the south side of the island, from Avola

on the south to Augusta on the north. It extends farther inland than any of the others, is not so mountainous, and has more mild climatic conditions. The fifth district lies between Messina and Palermo, on the north coast. It consists of groups of orchards around individual center towns, the largest of which is Barcelona. The small mainland district of Calabria may be neglected for all practical purposes, as the output forms a very small part of the total crop and is only interesting for the reason that the oil is made by machine instead of hand pressed.

COLLECTION OF SAMPLES.

The problem of collecting authentic samples in sufficient number to cover adequately not only the territory, but also the different periods of the season, was one of considerable difficulty. There seemed three possible ways to make satisfactory collections: First, by purchasing the fruit and hiring workmen to produce the oil under such supervision as would preclude the possibility of anything but genuine samples; second, by arranging with the factories to produce, under closest personal supervision, samples of oil from the fruit which was on hand; third, by visiting the factories unannounced and requesting samples at a stage in the manufacturing process where, beyond all reasonable doubt, no adulteration could have taken place.

It would seem, of course, that the first method was preferable to the others, but experience soon showed that it had many disadvantages. It was found practically impossible to hire workmen and space in which to manufacture the samples in other cities than Messina, except at excessive cost in both time and money. If either of the other methods would give the desired results they were much preferable on this account, and by using them it would be possible two or more samples a day. If the first methods were employed, the samples would average at most five or six a week, even if the oil were made at a central point. Moreover, the fruit is always somewhat damaged in shipping and very often delayed for some days, and thus abnormal oil might result. The second and third methods were open to the objection that no authentic information could be obtained relative to the fruit used, although indications of abnormality might be revealed by the peel, which could always be examined. It was seldom possible, however, to have samples prepared in the factories. Owners did not care to change the routine of their work for such a purpose, and where such samples were obtained the fruit used was generally that prepared the day before. Fruit cut and worked up immediately yields a much smaller quantity of oil than that prepared in the ordinary way, and this fact makes the possibility of obtaining abnormal results greater. Furthermore, samples of oil taken during the process of manufacture would more nearly represent the average output of a district, as the fruit would be more thoroughly mixed, and samples taken from several bowls in different parts of the pressing room would probably represent lemons from different lots purchased by the factory.

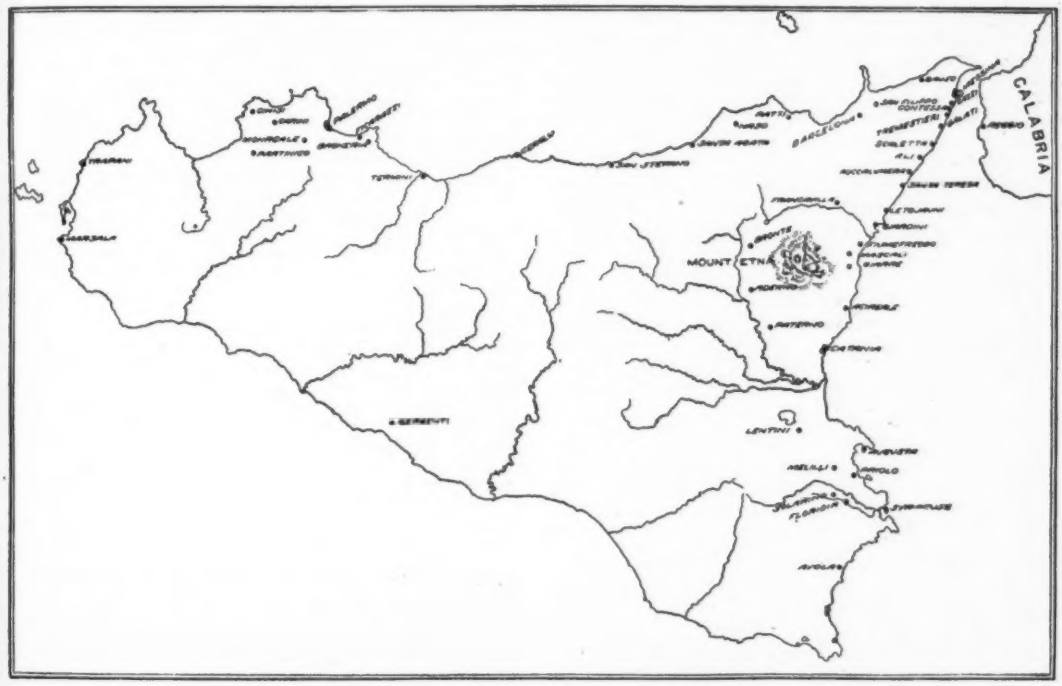


FIG. 1.—Map of Sicily showing the lemon producing districts.

After considering all sides of the question, it was decided to carry out the following plan: First, a large number of samples were collected from the bowls of the factory workmen while the factory was in operation. This assured a sample taken at a stage of the process of manufacture where intelligent adulteration would be impossible, for only very skillful sophistication can be practiced successfully by the producer at this point, since all the oil must undergo examination by the chemist of the purchasing broker. As such sophistication could only take place after the oil had been separated and measured, it would seem that only genuine samples would be collected in this way, unless, of course, the factory operators had been warned of the inspection and had deliberately adulterated the oil. Since, however, the prevailing opinion among the producers was that this investigation, if fairly conducted, would vindicate them, a great majority of manufacturers were anxious to see that samples obtained from

their places were representative and genuine beyond all possible doubt. Many insisted on drawing a sample from their storage tank in addition to the one taken from the working room in order to show that the oils were in no way different.

The factories were visited immediately upon arriving at the town in which they were situated and samples collected as soon as possible, so that the news of what was being done would have little time to spread. Close watch was kept on every move of the factory operators after arrival, and where suspicions were aroused the circumstances were noted, and the sample classed as not authentic in considering the final results. The greater part of the samples were taken in this way, the analyses of 130 of them included in the average of bowl and authentic samples given in Table XII.

In addition to these, a considerable number of samples were collected which were made in factories under close personal supervision from selected peel. This method was especially followed in the north coast of Palermo districts, owing to the peculiar methods of manufacture employed. Fifteen samples were taken in this way, the analyses being given in Table IV under the head of authentic samples made at factories. In addition to these, nine samples were made by hired workmen in a small

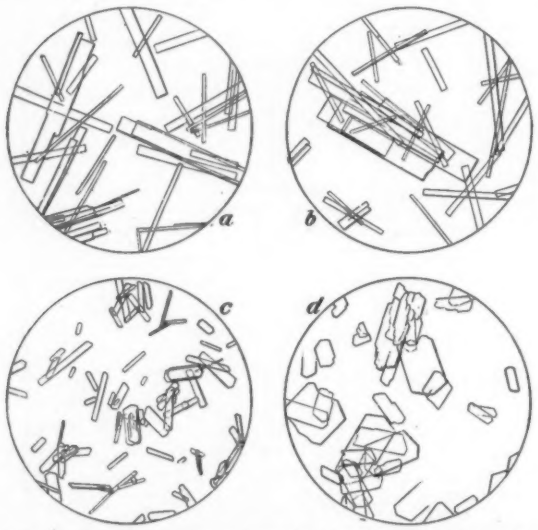


Fig. 2.—Photomicrographs of crystals from lemon oil (× 100). *a, b,* Limonene nitroso chlorid crystals from lemon oil; *c,* limonene and pinene nitroso chlorid crystals from a lemon oil mixed with 5 per cent. of turpentine; *d,* Pinene nitroso chlorid crystals from turpentine.

laboratory established for the purpose at Messina. Fruit was shipped from Syracuse, Etna, Messina, and north coast districts and worked up in a manner excluding to an unusual degree the possibility of contamination. This work was done late in December and in early January and was not repeated later on account of the length of time required and the injury caused to the fruit by shipment in small parcels. The results of the analyses of these samples are not included in the averages for the reason that they can not be discussed as fully as desired, and the average result is affected by several abnormal oils. All were examined for pinene, however, and the absence of that body in detectable quantities proven in every case. Whenever samples could not be obtained under conditions which seemed to justify their classification as authentic, they were purchased and classed as commercial. The 33 samples thus obtained are given in Table XI.

The inspection work began early in December, and a complete circuit of the district was made in that and the two following months. After the 15th of March the late Dr. A. S. Cheney, then consul at Messina, continued the collection of samples until the season closed, in May. Doctor Cheney had unusual qualifications for doing this work, being himself a trained chemist, and after a very successful collection had been made, his samples were forwarded to Washington and are included with the others.

METHODS OF ANALYSIS.

The same methods of examination were used in the preliminary analysis of these samples as had been used on the oils under dispute, namely: (1) Specific gravity at 15.5° C., by means of a picnometer or Sprengel tube; (2) rotation at 20° C., on a Smith and Haensch instrument in a water-jacketed 50 mm tube and conversion of the readings to angular degrees; (3) refractive index on an Abbe refractometer at 20° C.

A 50 cc portion of the oil was then distilled as described in Schimmel & Co.'s Reports for 1898, page 41. The rotation of this distillate was determined at 20° C., and it was then tested for pinene as follows:

The distillate was mixed with an equal volume of glacial acetic acid in a 2-ounce Erlemneyer flask and immersed in a freezing mixture. Ten cubic centimeters of ethyl nitrite were next added and finally, slowly with constant stirring, 2 cc of a mixture of two parts of concentrated hydrochloric acid and one part of water, all previously cooled. The whole was allowed to remain fifteen minutes in the freezing bath, then rapidly filtered on a Gooch crucible provided with a filter paper disk, using vacuum. The resulting crystals of nitroso chlorid of limonene were dissolved in the smallest possible amount of chloroform and reprecipitated with methyl alcohol. After filtering of these crystals they were mounted with olive oil and examined under the microscope, using a magnification of 100. (See fig. 2.) If present, pinene nitroso chlorid is easily detected by its comparatively broad crystals having irregular pyramidal ends, limonene nitroso chlorid crystallizing in needle shapes or columns.

The citral was determined by the fuchsin sulphite colorimetric method, which at the time of making the analyses was the most accurate method available. The method, in the hands of an expert manipulator, gives results within two-tenths of a per cent of the actual amount present, the error being uniformly positive.

(*To be continued.*)

ETHYL ALCOHOL FROM WOOD WASTE.

According to the *Scientific American* a process for the manufacture of a high grade ethyl alcohol from wood waste has been developed by The Standard Alcohol Company, Chicago, according to patents granted to Malcolm F. Ewen and George H. Tomlinson, of Chicago.

Sawdust, shavings, slabs and other refuse of the lumber mill are "digested" in a machine performing the functions of a mechanical stomach. The digester converts the starch of the wood waste into sugar. Upon completion of the digestion, the liquid material is pumped to the distillery fermenting tanks. A special yeast similar to brewers' yeast is added, and fermentation begins, from this point the process being no different from that of making grain alcohol.

It is claimed that every kind and form of wood has been used, but always with the same results, a purer alcohol being obtained than that which is generally obtained from grain; and at a cost not exceeding 10 cents a gallon.

One of the greatest advantages of the production of a pure alcohol from wood will be the release for food purposes of millions of bushels of corn and barley now consumed in the manufacture of grain alcohol.

THE OLIVE OIL SITUATION ABROAD.

By L. Mazuyer.

We have obtained from the direction of the Service of Oleoculture the following information on the subject of the estimates of the olive crop in the chief producing countries:

France.—The prospect is for a harvest very much inferior to the last one. This decrease is due to several causes, of which the principal is the exhaustion of the trees by the heavy yield of 1908. Many of the trees trimmed this year are bearing no fruit. The blossoming was impeded by abrupt changes of temperature. Lastly, the caterpillars have caused many of the blossoms to drop off and have made the fruit fall off during the entire summer. In the Maritime Alps, where the snow caused damage, in many places, which will be felt for years, the harvest will be very much diminished. There is a good deal of inequality in different places; some regions, or even certain trees in the same locality, will give a good yield, but these cases are very exceptional.

Some localities in the Var department seem to fare better, they are, however, exceptional, and the general condition is very bad. This is also the case in the other departments except Les Bouches du Rhône, where about one-third of an average crop is expected, and in Corsica where the trees which last year were unproductive, promise a very good yield.

Up to the present time the fly (mouche) does not seem to have done serious damage, but we hear some reports from all around of the ravages of that insect as a result of the September rains and some damage may yet be done in regions where the harvest is late.

Algiers.—The outlook for the next harvest is good everywhere and particularly in the arrondissements, Tlemcen, Lizi, Ouzon, Bougie, Constantine and Philippeville, with the exception of the region of the Sig, where the falling of the blossoms has occasioned considerable losses, and in some regions where the sirocco has caused the fruit to fall, a yield is looked for about equal to that of 1907-1908.

Tunis.—The olive orchards of Cape Bon, Tunis, Tabourba and Bizerte are looking very well and give promise of a yield of about two-thirds or three-fourths of a good harvest. The extensive orchards of the regions of Sfax, Sousse, Mahdis and Monastir are remarkable this year for the quantity and quality of fruit.

Italy.—According to the latest estimates the coming harvest will be meager in general, perhaps about equal to a third of a normal yield. Among the more favored portions are Tuscany, Calabria, Sicily, the province of Bari and Sardinia. Everywhere else the appearances are not encouraging. As the fly, except in Liguria, has done no important damage, it is expected that the quality of the fruit will be good.

Spain.—In Catalonia, Aragon and in the important oil-bearing sections of Andalusia (the provinces of Cordova, Seville, Granada, Malaga and Juan) the crop shows highly favorable conditions, quite the opposite of last year. About 60 or 75 per cent. of a full crop is expected.

NEW PROCESS FOR THE EXTRACTION OF OLIVE OIL.

During the past few years attempts at perfecting the usual methods for extracting the oil have resulted in the employment of a principle which differs from that of the press. At a recent session of the Italian Society of Agriculturists, Mr. Bracci showed the results obtained during the past six years by experiments in a new direction. The *Revue Scientifique* says that trials were made of four different methods of extraction; a chemical process; diffusion; centrifugal force and vacuum treatment. In the first named process the pulp resulting from the crushing of the olives is brought in contact with dilute alkaline solution; an electric current is passed through the mixture, it is kept in motion by compressed air and heated to 30 or 40° centigrade. At the expiration of six hours the mass is allowed to stand for an additional six hours, when the oil matter rises to the surface. It is collected and brought in contact with a solution of alum of a strength of 1.5 per cent. and a certain quantity of sea water. The electric current, the heating and the injection of the air are repeated for a period of from 7 to 12 hours. The oil is now decanted and filtered; it is then of a very pale yellow color and almost completely without acidity, which predisposes it to become rancid. On the other hand it has a slight taste of wood, probably due to the beginning of saponification. These defects added to the poor yield given by the chemical process will probably condemn it unless it shall be very much improved.

Diffusion is practiced by the aid of a battery of diffusers of one of the forms in use for operations of that kind; the liquid employed is sea water or a solution of sea salt. The mass is heated to 25 or 30 degs. Cent. and is stirred by a system of paddles. This process, like the preceding one, yields less than the press and has the additional disadvantage that the pulp obtained when treated by the hydraulic press, after a kneading with hot water, yields no more oil while it still contains a considerable quantity of it.

The oil obtained by this process is sweeter and less colored than that obtained by the press. The yield could probably be increased, but there will always be one great obstacle to the adoption of the process, to-wit, the cost of its installation and the additional one that a considerable quantity of water is required; this is not always readily obtainable.

The third process (centrifugal), very alluring in principle, was much praised in 1902. Mr. Bracci found that in laboratory tests a liquid containing, by weight, 6 per cent. water and 14 to 16 per cent. oil was readily obtained, but that the residue sticks to the meshes of the basket and that it is impossible to extract any more of the oil even after malaxage with hot water. These results agree with those obtained at the University of California with sugar refinery turbines; moreover, the oil thus obtained has a slight taste of iron and is subject or liable to premature rancidity. The installation is costly and it seems likely that this method also will be rejected.

The last method attempted is vacuum extraction. The pulp is placed in the upper half of a metallic cylinder on a strainer with a very fine mesh; the lower part of this cylinder is connected with a vacuum pump. As Mr. Bracci

(*Concluded on page* 178.)

TRADE NOTES

Mr. Justin E. Smith, of The Seely Co., Detroit, Mich., was looking fine and trim when our representative dropped in to see him recently. This in spite of the press of business. The prospects for next year seem very bright to Mr. Smith, especially for high-grade goods.

A recent visitor to our sanctum was Mr. A. O. Freedman, of the Arthur Chemical Co., New Haven, Conn. That concern was established about 8 months ago to make household medicines that were sold in cabinet sets to country stores. The factory now occupies 15,000 square feet of floor space, and has built up an extensive trade in toilet and pharmaceutical preparations.

MR. A. O. FREEDMAN.

Mr. F. J. M. Miles, formerly perfumer for The Heffron Co., Syracuse, N. Y., is now representing W. J. Bush & Co., Inc., New York, in the Pacific coast States, with headquarters in San Francisco.

Mr. C. H. Pabst, of Pabst & Kohler, Columbus, O., manufacturers of barbers' supplies, is a great sportsman. Every fall he hunts through the southern part of Ohio, and this year, to make certain of a full game bag, he invested in a well-trained setter. The dog's name is "Spots," but he, or she, no longer answers to Mr. Pabst's call, for some one has annexed "it." Mr. Pabst's friends are hoping that Police Chief "Jim" O'Connor will soon recover "Spots," and make good his reputation as a successor to Sherlock Holmes.

Mr. James McKnight, traveler for George Lueders & Co., New York, is on his last trip of the year. He told our representative, who met him at the funeral of Mr. Adolph Spiehler, that perfumers are buying more freely in anticipation of a steady increase in business.

The Metal Package Co., Brooklyn, N. Y., has opened a Western office in the Liggett Building, St. Louis, in charge of Mr. Jules Smucker.

Mr. Theodore Shipkoff, of Kazanlik, Bulgaria, sailed for home on Oct. 7. This visit, an annual one, was made in the interest of Shipkoff & Co., producers of otto of rose.

M. L. Barrett & Co., Chicago, have sent us circulars dealing with vanilla beans and waxes. Among the latter they specify several, of interest to makers of creams, including natural yellow, refined yellow and pure sun-bleached beeswax, ceresine, stearine and cold cream oil.

We are in receipt of the temporary prospectus of the Merchants' Syndicate of St. Louis, Mo. They plan to organize with a capital of $4,000,000; preferred stock $2,000,000, and an equal amount of common. The latter will be given as a bonus to purchasers of the preferred. Both varieties are to be issued at a par value of $1 per share, and the preferred sold at from 10 cents to 75 cents per share. The concern expects to pay 4 per cent. dividends on the preferred stock. Dr. F. William Runde, proprietor of the Tower Drug Co., and Ednur Pharmacal Co., St. Louis, will have full charge of the laboratory.

Mr. F. E. Toennies, of Heine & Co., New York, started recently on a Western trip of several months' duration. He will go as far as the Coast.

We present herewith a portrait of Mr. Paul Jeancard, of Jeancard Fils & Co., Cannes, France, in the uniform of a captain of artillery. Mr. Jeancard is a man of intense energy and unbounded patriotism; yet from what we have learned of his personal characteristics we think he would make a good American and achieve the rank of Captain of Industry in the Army of American Manufacturers, were it possible to conduct his *fabrique* here.

MR. PAUL JEANCARD.

A fire completely destroyed the soap and tallow manufacturing plant belonging to Charles Bardeen in the town of Greenfield, N. Y., Oct. 25, about 10 a. m. The loss is estimated at $5,000, and is not covered by insurance.

The entire business of The Williams Co., Rochester, N. Y., is offered for sale by Chas. S. Williams, attorney, as per the advertisement on page XIX of this issue. The Williams Co. is successor to the Crescent Perfume Co.

The building that is used by Innis, Speiden & Co., as Chicago headquarters was slightly damaged by fire on the

night of Nov. 13. We are advised that the stock was not damaged at all, and that there will be no delay in filling orders.

Mr. Fred West, of the E. Armant Co., Binghamton, N. Y., was a recent visitor to New York.

Messrs. Rockhill & Vietor, New York, have been appointed agents for Alexander Reichardt, Waronesh, Russia, shipper of crude drugs.

H. A. Johnson, H. C. Smith, and Geo. M. Browder are the incorporators of the Booster Soap Co., Denison, Tex., capital, $10,000.

Mr. A. F. Kammer, who is connected with the New York office of the Carr-Lowrey Glass Co., of Baltimore, Md., is an enthusiastic golfer. He is a member of the Fox Hills Club and recently won the championship of Staten Island in a contest played on the course of the Richmond County Golf Club.

Mr. Edward Weingartner, the president of the Arabol Mfg. Co., New York, whose products are a staple with many of our readers, has returned from a prolonged trip to Europe. His journey was a very successful one, connecting recreation and pleasure, with a study of business and its methods in his line.

Mr. Wm. G. Ungerer returned to the city recently from a visit to the Chicago and Philadelphia branches of Ungerer & Co. The concern is represented in Philadelphia by Edward Trippe. Mr. Trippe is a Southern gentleman who makes a pleasing appearance, and this combined with his agreeable personality and persistent work, has enabled him to make a considerable impression on the trade in his vicinity.

MR. EDWARD TRIPPE.

Mr. L. Givaudan, Geneva, Switzerland, manufacturer of synthetics, arrived by *La Savoie* on the 6th inst. Mr. Givaudan is an ardent balloonist, and came in second in the recent contest, having covered the distance from Paris to the borders of Russia.

The Sacramento Soap Co. filed articles of incorporation on Oct. 18. The company is incorporated for $100,000, about half of which is paid in. The company purposes to construct a modernly equipped factory on a site of half a block between Third and Fourth and W and X streets. It is the purpose of the company to produce a standard line of naphtha, laundry and toilet soaps. The directors of the company are Henry Abels, president, of San Francisco; Mayor Clinton L. White, vice-president; Mark Sherwin, secretary and treasurer; Mel Newfield, of Berkeley, and J. L. Maden, of Sacramento. Sherwin is to go East shortly for the purpose of securing the most modern machinery for the new plant. The company will employ a large number of men.

Mr. Felix Bazin, formerly perfumer for The Tappan Perfume Co., and Lazell, Dalley & Co., New York, died suddenly on Nov. 16 at his late home, 59 13th street, Hoboken, N. J. He was a son of the late X. Bazin, founder of what was the oldest perfume house in America. Mr. Felix Bazin had been in poor health for some time, so his death was not entirely unexpected. He leaves a widow and one son.

MR. FELIX BAZIN.

Mr. Jean Bagaroff, a partner in the firm of V. Petcheff & Co., Sopote, Bulgaria, sailed on the *Mauretania*, Nov. 3. V. Petcheff & Co. are producers of otto of rose and have appointed Rockhill & Victor, New York, agents.

Arabian Toilet Co., Nashville, Tenn.; capital, $10,000. Incorporators: E. R. Betterson, F. B. Holt, L. C. Riddles, J. O. Martin, W. C. England.

Northwestern Soap Co., Indianapolis, Ind.; capital stock, $10,000. The manufacture and sale of soap, washing powder, perfumes and other toilet and laundry preparations. Officers: Edward Hayes, president; Charles Cook, vice-president; Henry W. Cleage, treasurer; George Worthington, secretary.

T. J. Peterson Co., Chicago and New York, are offering Pristine perfume spirit for use in perfumes and toilet waters. The use of methyl alcohol has not made very great progress in this industry, but if properly refined and deodorized there should be a field for it, provided, of course, the results justify its adoption.

Mr. G. Laffitte, of Roure Bertrand Fils, Grasse, France, sailed for home by the *George Washington*, on Nov. 16.

The storehouse of the Tetlow Mfg. Co., 59 N. Mascher street, Philadelphia, Pa., was slightly damaged by fire on the 16th inst. The usual run of the factory has not been disturbed.

The firm of Heine & Co., Leipzig, Germany, have just celebrated their semi-centennial, and we are indebted to Mr. Paul Schulze-Berge, Jr., of the American house, Heine & Co., New York, who has just returned from a trip abroad for the following particulars. The business was established by Dr. Karl Heine, in Leipzig, as that city, on account of its favorable climate, is the center of the perfume material industry of Germany. During the first 15 or 20 years attention was devoted principally to the distillation of seeds and drugs raised in the vicinity, and

WORKS AND ADMINISTRATION BUILDING.

later some of the more important oils obtainable from foreign raw materials were distilled. In 1875, through the investigation of Dr. Gustav Krämer, the production of synthetic mustard oil was begun. While the '80's were notable for commercial work rather than chemico-technological processes, the manufacture of certain simple basic substances occurring in essential oils, such as menthol, anethol, thymol, etc., received increased attention; so when the son of the senior chief Dr. Otto Steche, Albert Steche, Ph. D., entered the business in 1887, there were a number of intricate questions awaiting him. He was admitted to partnership in 1889. On account of the

PART OF THE OIL DISTILLERY.

demands on his time made by business development he secured the services of Dr. H. Von Soden, a chemist of high standing in the German industrial chemistry field. In 1893, Dr. A. Hesse was added to the staff, and he made a specialty of the investigation of natural perfumes.

To develop the commercial side of the business a partnership in the firm was offered to Mr. Hans Steche, and to him much credit should be given for the rapid growth of the firm of late years.

Dr. Heine, the founder of the business, died in 1888, and Mr. Otto Steche, after an active career of nearly 50 years, retired in 1903, dying in 1908 at the ripe age of 74 years.

In 1902 Dr. Hesse resigned to accept the editorship of the *Chemisches Zentralblatt*, and was succeeded by Dr. Von Soden.

Owing to the growth of the concern it was found necessary to erect additional factories at Gröba-Riesa, Germany, and Grasse, France. Altogether the production during the past 20 years has increased 4½ times; the number of employees 5 times, and during the past business year, 1908-09, about 2¾ million pounds of flowers, drugs and other raw materials were distilled.

PUBLICATIONS AND CIRCULARS RECEIVED.

C. E. Sholes Co., New York, have sent us their price list of volatile oils and perfumers' supplies. This is a conveniently arranged list of 34 pages, which, excepting the cover, is from the private presses of the Sholes Co. The cover is a very tasteful piece of lithographic work. Mention is made of the consulting staff of chemists, including Ernest J. Parry, J. E. Teeple and A. G. Stilwell. The chief chemist is Mr. C. S. Avery.

The Federal Spice Standards, by R. O. Brooks, B. Sc., consulting food inspection chemist, formerly State chemist of New Jersey and Pennsylvania. (The Spice Mills Publishing Co., New York.—60 pages—cloth, 8vo.). This excellent brochure of the interpretation and possibilities of the federal spice standards is compiled from a series of articles by Mr. Brooks, published in *The Spice Mill*, January to December, 1907, reedited by the author, with introductory note and addition of interest. This brochure should be in the hands of every one that grinds spices.

Fritzsche Brothers, New York.—Price list of specialties (second edition). Special attention is called to the following synthetic flower oils: May-Blossom, Laburmum, Sweet Pea (Lathyrene) and Wistaria. Reductions in price have been made in the following: Oils Hyacinth, Orris and Aubéfine, and in Benzylbenzoate.

Chemische Werke Roermond (formerly W. Mallman, A. G.), Roermond, Holland.—Price list No. 10, 1909, of artificial and synthetic perfume materials. Special attention is called to Musk Xylol, 100 per cent.

Foote & Jenks, Jackson, Mich., have sent us a copy of an open letter they have sent to the trade concerning the use of benzoate of soda in food products. Their argument is practically unanswerable, especially in view of the decision of the Remsen Referee Board.

Stafford Allen & Sons, Ltd., London, have sent us their November price list of distilled essential oils. Special attention is called to almond oil (sweet) which has dropped in price.

Descollonges, Frères & Augé, Lyons, France, have sent us the following circular letter:

"Owing to the increased development of our business, we find our present premises much too small for our requirements.

"We have therefore erected a new factory, which we have equipped with a complete modern installation, situated at Place de Croix-Luizet, Lyon-Villeurbanne, of which address we ask you to kindly take note.

Jeancard, Fils & Co., Cannes, France.—Wholesale price list No. 12, October, 1909.—Special attention is directed to pomades, floressences, resinaromes, terpeneless essential oils and organic products. In connection with the list of general essential oils, many scientific notes are given. This makes the list of unusual value to the scientific perfumers.

CHUIT, NAEF & Co., Geneva, Switzerland.—Wholesale price list for November of synthetic perfume materials. Special attention is called to the following products: Roseol acetate, ethyl cinnamate, methyl cinnamate, phenylethylol, roseol, jasmantheme, pelargonia and persicol.

J. H. DAY Co., Cincinnati, O.—We are in receipt of that springhtly house organ, *Daylight*. It would almost pass for an independent journal, as the editorial and text matter is newsy and interesting and not solely devoted to the business of the publishers. The J. H. Day Co. make grinding, sifting and mixing machinery.

RACHMANN BROS., Haida, Bohemia, have sent us handsomely illustrateed catalogues and price lists of their glassware. They make a specialty of perfume bottles of all descriptions, including those with long-tongue stoppers for alcohol-free perfumes.

PURE FOOD AND DRUG NOTES.

In this section will be found all matters of interest contained in FEDERAL and STATE official reports, newspaper items, etc., relating to perfumes, flavoring extracts, etc.

FEDERAL.

Circular No. 46, Bureau of Chemistry, United States Department of Agriculture: "The Occurrence of Pinene in Lemon Oil," by E. M. Chace, chief, Food Technology Laboratory, Division of Foods. [The publication of this circular in full is begun in this issue.]

Notice of judgment Nos. 106, 107 and 110:

No. 106. Misbranding of a cane sirup.
(As to presence of glucose.)

No. 107. Misbranding of Vermont or maple sugar.
(As to presence of cane sugar.)

No. 110. Misbranding of sirup.
(As to quantity.)

STATE.

KANSAS.—Bulletin of the State Board of Health, Oct., 1909; Vol V, No. 10.—Twenty-one samples essence of peppermint were examined, of which 20 proved to be below the 10 per cent. standard.

The following detailed reports of analysis are given:

No. 3245.—"Quinola," mfr., H. S. Peterson & Co., Chicago.—Quinola, combined with alcohol and water, is recommended by the manufacturer as hair tonic. Quinola was found to contain quassia (a carbonate) and quinine.

No. 3270.—"Chamberlain's Essence of Peppermint"; mfr., Chamberlain Medicine Co., Des Moines, Iowa.—Found to contain 3.37 cc. of oil in 100 cc. of the preparation, and about 20 per cent. added water.

No. 1379.—"Crown Concentrated Extract of Vanilla"; mfr., Crown Chemical Works. Winton lead No. 0.17.—This extract is misbranded by its claim of "Concentrated Extract," and adulterated because something has been substituted for the soluble constituents of vanilla beans.

No. 2041.—"Essence Vanilla" (mfr. not given).—This is misbranded by its claim of "Essence Vanilla," and adulterated because of some substitution for the soluble constituents of vanilla beans.

No. 3178.—"Midland's Pure Flavoring Extract Vanilla"; distributors, Midland Grocery Company, Denver, Col.; Winton lead No. 0.63.—Misbranded by its claim "Flavoring Extract of Vanilla," and adulterated because of some substitution for the soluble constituents of vanilla beans.

No. 3353.—"Eddy's Extract of Vanilla, Two Ounces Full"; mfr., Eddy & Eddy, St. Louis, Mo.—This is a weak extract. Winton lead No. 0.86. This extract is not declared illegal, but is doubtful.

No. 6247.—"Standard Extract of Vanilla"; mfr., Malacca Mills, Kansas City.—Winton lead No. 0.28. Misbranded by its claim "Standard Extract of Vanilla," and adulterated because of a substitution for the soluble constituents of vanilla beans.

No. 6251.—"Eddy's Gold Medal Extract of Vanilla"; mfr., Eddy & Eddy, St. Louis, Mo.—Winton lead No. 0.79. This is a weak extract. It is not declared illegal, but is doubtful.

No. 7148.—"Purity Triple Extract of Vanilla, Warranted Pure, Serial No. 6593"; mfr., Purity Chemical Co., Chicago.—This is a weak extract and is misbranded by its claim, "Triple Extract of Vanilla," and is adulterated in that it does not contain the soluble constituents of 30 grams of vanilla beans in each 100 cc. of extract.

No. 7538.—"Flavoring Extract of Vanilla, Primrose Brand"; mfr., Parkhurst-Davis Merc. Co., Topeka, Kan.—Contains a coal-tar dye. Is misbranded by its claim "Extract of Vanilla," and adulterated in that it is colored to make it appear better than it really is.

LEMON EXTRACT.

No. 2113.—"Essence of Lemon" (mfr. not given).—Lemon oil is not to exceed 0.3 of 1 per cent. Retail price, 10 cents per ounce. "Taken from shelf bottle in drug store." Illegal.

No. 2116.—"Extract of Lemon" (mfr. not given).—Lemon oil 0.9 of 1 per cent. "Taken from shelf bottle labeled 'Tr. Lemon,' labeled 'Ext. Lemon' when sold." Illegal.

No. 2145.—"Ess. Lemon" (mfr. not given).—Lemon oil not to exceed 0.3 of 1 per cent. and colored by coal-tar dye. "Taken from shelf bottle in drug store." Illegal.

No. 7472.—No label save inspector's; mfr., Brownfield & Davis, Iola, Kan.; retailer, C. C. Kennedy, Yates Center.—Lemon oil not to exceed 0.3 of 1 per cent. Retail price, 45 cents for three ounces. Illegal.

No. 9057.—"Tone Brothers' Reliable Extract Lemon, Two Ounces Full Measure"; mfr., Tone Bros., Des Moines, Iowa.—This sample is passed in respect to content of lemon oil, but the bottles are short measure. One bottle was 6.25 per cent short measure. Second bottle was 12½ per cent. short measure. Illegal.

No. 9090.—"Tinc. Limon. Townsend the Druggist" (mfr. not given); retailer, Townsend Drug Company, Abilene, Kan.—Lemon oil, 0.4 of 1 per cent. Retail price, 25 cents for three ounces. Tinc. Limon is equivalent to extract of lemon, and therefore should contain 5 per cent. lemon oil. Illegal.

MAINE.—Official inspections No. 14.—Maine Food and Drug Law, Regulations and Standards. Revised to September, 1909. The following statement is made regarding flavoring extracts:

EXTRACTS.

SHORT MEASURE.

In the early summer of 1909 the inspector was sent to wholesale houses with instructions to weigh and measure the different kinds of package and bottle goods in stock. Among other things it was found that the goods of three manufacturers of extracts were uniformly short measure. Original boxes of these goods were purchased, the contents of the bottles were carefully measured at the laboratory and analyzed. Hearings were appointed, and as complete an investigation made as practicable. No prosecutions have been begun as yet against the Maine firms, and it may be that the short measure cases will not be carried further.

It would seem that manufacturers have been in the habit of ordering two or four ounce bottles as the case may be. The makers send bottles that will hold the desired amount when full. If a bottle is completely filled with liquid an increase in temperature blows the cork out of the bottle. Makers of extracts therefore leave an air bubble of greater or less amount in the top. This brings it about that unless the precaution has been taken of ordering a bottle larger than required to hold the amount there has been a 5 to

15 per cent. shortage. Most makers do not label the bottles to show the measure they are expected to hold. The Schlotterbeck and Foss Company, Portland, Me., mark the measure on the box but put no statement of measure on the carton or the bottle that is given to the customer. The Dolan and Furnival Company, Portland, Me., put no statement of measure on the bottle except that which is implied in the name of the goods "Four ounce brand." Both of these companies are at fault in what has been their practice, and both claim that it shall not occur in future output. The goods made by Frank E. Harris, Binghamton, N. Y., were sold into the State under written guaranty, and the cases were reported to the U. S. Board of Food and Drug Inspection.

No. 7941.—E. Hartshorn & Sons, Boston, Mass.—"Extract of Checkerberry."—Short measure.

No. 7939.—E. Hartshorn & Sons, Boston.—"Extract of Peppermint."—Short measure.

NEW HAMPSHIRE.—Sanitary Bulletin (quarterly), July-October, 1909:

FLAVORING EXTRACTS.

A few flagrant cases of misbranding are given in the accompanying notes.

An interesting line of flavoring preparations, put out by J. M. Pitkin, Newark, N. J., consists of a mixture or emulsion of the different flavoring principles with glycerin and what appears to be gum tragacanth so as to form a paste. The manufacturer rightly claims that much of the cost of an extract is in the non-flavoring vehicle, *i. e.*, the alcohol, and to this extent his scheme seems a commendable one. Unfortunately he goes altogether too far in the claims he makes as to the strength of some of his products. The tubes sell for twenty-five cents, which is emphasized as being the price one would pay for "a two-ounce bottle of good alcoholic extract," whereas it is represented that one such tube is "actually equivalent to about ten ounces of the best alcoholic extract, which would cost $1.25." As though this were putting it too modestly, in another part of the circular the value of a twenty-five cent tube in terms of standard extract is stretched up to "about a pint."

An analysis of the lemon of this brand shows but 2.83 per cent. by weight of lemon oil. This represents a quantity of oil in one tube which if, dissolved to two ounces, would give a solution of but one-fifth standard strength, or, to put it another way, the quantity of oil actually present is sufficient to make less than one-half ounce of standard extract. From which it is evident that instead of getting five times the value of two ounces of standard extract as claimed, one is in reality receiving but about one-fifth the value of such two ounces.

OLIVE OIL.

That the designation "salad oil," like "sweet oil," is commonly recognized as synonymous with olive oil, is evident from the fact that dealers not uncommonly fill orders for the latter with brands labeled as in the first instance. Doubtless many grocers believe these to be identical; certainly the average housekeeper does, and for this reason the above labeling, applied without qualification to substitutes of cottonseed oil, is calculated to deceive and may therefore be properly held as misbranding.

MISBRANDED PRODUCTS.

4586.—"Purity Salad Oil"; mfr., J. H. Folkins, Boston, Mass.—Cottonseed oil; sold to inspector as olive oil. Improperly branded.

VANILLA EXTRACTS.

4495.—"Granite State Premium." Granite State Tea Co., Contoocook, N. H.—Adulterated and misbranded; artificial product.

4567.—"Kellogg's Pure Extract Vanilla." F. P. Adams & Co., Boston, Mass.—Adulterated with coumarin.

4716[1].—"Concentrated Extract Vanilla." C. H. Eddy & Co., Brattleboro, Vt.—Misbranded.

47802.—"Compound Concentrated Extract of Water White Vanilla." Theodore Metcalf Co., Boston, Mass.—Adulterated and misbranded.

LEMON.

4496.—"Granite State Premium." Granite State Tea Co., Contoocook, N. H.—Misbranded.

4549.—"Alcono Lemon Flavor (paste)." J. M. Pitkin Co., Newark, N. J.—Misbranded.

4556[3].—"Huffer's Flavor of Lemon." Germania Medicine Co., Holyoke, Mass.—Misbranded.

4558[4].—"Lemon Flavoring." Le Healol Prep. Co., Melrose, Mass.—Misbranded.

4559.—"Kellogg's Extract Lemon." F. P. Adams & Co., Boston, Mass.—Added color not declared.

4561.—"Leighton's Pure Extract." R. G. Leighton, Portland, Me.—Added color not properly declared.

4783.—"Charter Oak Lemon." Hartford Ext. Co., Hartford, Conn.—Below standard.

ORANGE.

4574.—"Williams Choice Orange." Williams & Carleton Co., Hartford, Conn.—Below standard.

4575[5].—"Concentrated Com. Orange Flavoring." W. S. Shaw, Newburyport, Mass.—Misbranded.

4785.—"A. P. P. Concentrated Extract Orange." A. P. Preston, Portsmouth, N. H.—Standard strength; not "concentrated."

MISCELLANEOUS.

4555[6].—"Hupfer's Flavor of Strawberry." Germania Medicine Co., Holyoke, Mass.—Misbranded.

4565[7].—"Hupfer's Flavor of Pineapple." Germania Medicine Co., Holyoke, Mass.—Misbranded.

3789.—"Dr. Price's Extract of True Peach." Price Flavoring Extract Co., Chicago, Ill.—Misbranded, imitation.

4497.—"Granite State Extract Wintergreen." Granite State Tea Co., Contoocook, N. H.—Below standard.

4790[8].—"Genuine Checkerberry." Twitchell-Champlin Co., Portland, Me.—Below standard.

4792[8].—"Genuine Essence Wintergreen." Haskell & Adams, Boston, Mass.—Below standard.

4787[8].—"Carter's Essence Peppermint." L. F. Carter, Georgetown, Mass.—Below standard.

4788[9].—"Extract Peppermint." Bliss & Co., Salem, Mass.—Misbranded.

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[1] 4716, conspicuously labeled as "Concentrated Extract of Vanilla," and as "Strictly Pure Extract of Vanilla." A formula showing imitation character is obscurely placed. "Guaranteed under the Food and Drugs Act."

[2] 4780, certified as "an honest extract of superlative strength, aroma, flavor and keeping qualities. It is the only extract, to my knowledge of which it can be truthfully said it is perfectly pure." This remarkable claim is reinforced by the display upon the label of a bale of vanilla beans.

[3] 4556, claims oil lemon 3½ per cent. Artificial color not declared.

[4] 4558, claims lemon oil 3.51 per cent., tincture of lemon peel 3.51 per cent., alcohol 28.56; color trace. "We do not use so-called concentrated lemon oil." As a matter of fact there is no such thing as "concentrated" lemon oil.

[5] 4555, claims "alcohol 50 per cent., oil of strawberry 2.5 per cent." Contains no oil of strawberry. Imitation character and artificial color not declared.

[6] 4565, claims "alcohol 50 per cent., oil of pineapple 2.5 per cent." Contains no oil of pineapple. Imitation character not declared.

[7] 4790, the term "essence" is recognized as synonymous with the designation "spirits." The U. S. P. requirement for wintergreen is 5 per cent. of oil; for peppermint, 10 per cent. of oil. The standard for peppermint and wintergreen extracts used for flavoring purposes is 3 per cent. of oil.

[8] 4788, labeled as containing not more than 12 per cent. alcohol While there is no standard for medicinal extract of peppermint, and the brand is therefore properly labeled as to alcoholic content, the manufacturer has made the mistake of giving the dosage for the strong (10 per cent.) spirits, thus implying much greater strength than is the case.

TREASURY DECISIONS.

In our October issue, we reported the gist of a press dispatch from Washington to the effect that "cans, boxes, packages and other containers of all kinds covered by paragraph 195 of the tariff act, shall pay duty according to the contents."

We have since received the official text of this Treasury decision, No. 30046, which reads as follows

(T. D. 30046.)

Cans, boxes, packages, and other containers.

The various provisions of paragraph 195 of the tariff act of August 5, 1909, relating to the assessment of duty on cans, boxes, etc., construed.

TREASURY DEPARTMENT, October 18, 1909.

SIR: The department is in receipt of your letter of the 14th ultimo, in which, referring to the Department's instructions of August 20, 1909, addressed to the collector of customs at Chicago (T. D. 29963), interpreting the closing proviso to paragraph 195 of the tariff act of August 5, 1909, you request to be further instructed as to the interpretation to be given the various provisions of that paragraph.

In reply, I have to advise you that the Department construes the first clause of paragraph 195—which reads as follows, "Cans, boxes, packages, and other containers of all kinds (except such as are hermetically sealed by soldering or otherwise), composed wholly or in chief of metal lacquered or printed by any process of lithography whatever, if filled or unfilled, and whether their contents be dutiable or free, four cents per pound and thirty-five per centum ad valorem":—to cover only such containers as are composed wholly or in chief value of metal either lacquered or printed by any process of lithography. The Department interprets the term "hermetically sealed by soldering or otherwise" to cover such metal cans, boxes, packages, and other containers only as are made impervious to air and fluids by welding, soldering, or fusing the parts at the openings, and does not include the sealing by molten wax, paraffin, paste, or other similar temporary methods of sealing.

As to the second clause—which reads as follows: "*Provided*, That none of the foregoing articles shall pay a less rate of duty than 55 per centum ad valorem; but no cans, boxes, packages, or containers of any kind, of the capacity of five pounds or under, subject to duty under this paragraph, shall pay less duty than if the same were imported empty"; the department holds that the metal cans, boxes, packages, or containers specified in the first clause shall not pay a less rate of duty than 55 per cent. ad valorem, and that cans, boxes, packages, or containers of metal of the kind specified in the first clause, when of the capacity of five pounds or under, shall pay duty at the rate of 4 cents per pound and 35 per cent. ad valorem, provided such rate is not less than 55 per cent. ad valorem, and provided further that such rate of 55 per cent. ad valorem is not less than the duty which would be chargeable on such cans, boxes, packages, and other containers if imported empty.

As to the succeeding provision—which reads as follows: "And the dutiable value of the same shall include all packing charges, cartons, wrappings, envelopes, and printed matter accompanying them when such cans, boxes, packages, or containers are imported wholly or partly filled with merchandise exempt from duty (except liquids and merchandise commercially known as drugs), and which is commonly dealt in at wholesale in the country of original exportation, in bulk or in packages exceeding five pounds in capacity";—the Department holds that where merchandise which is commonly dealt in at wholesale, such as tea, in the country of original exportation in bulk or in packages exceeding 5 pounds in capacity, is imported in metal cans or containers of 5 pounds or under in capacity, the dutiable value of such containers shall include all packing charges, cartons, wrappings, envelopes, and printed matter accompanying them when such cans, boxes, packages, or other containers are imported wholly or partly filled with merchandise exempt from duty (except liquids and merchandise commercially known as drugs).

As to the last clause of the said paragraph—which reads as follows: "*Provided further*, That paper, cardboard or pasteboard wrappings or containers that are made and used only for the purpose of holding or containing the article with which they are filled, and after such use are mere waste material, shall not be dutiable unless their contents are dutiable":—the Department holds that paper, cardboard or pasteboard wrappings, or containers, regardless of capacity, if filled with free goods, are free of duty; if filled with merchandise subject purely to ad valorem duties they are not separately dutiable under this paragraph, but are dutiable under the provisions of subsection 18 of section 28 of the tariff act of August 5, 1909; if containing merchandise subject to compound rates of duty they are not subject to a separate duty under this paragraph, but are also dutiable under subsection 18 of section 28 of the act of August 5, 1909; if containing merchandise subject to purely specific rates of duty such paper, cardboard or pasteboard wrappings, or containers are dutiable at the rates which would be imposed thereon if imported empty. The Department's instructions of August 20, 1909 (T. D. 29963), are accordingly reaffirmed.

Respectfully, CHARLES D. NORTON,
Acting Secretary.

COLLECTOR OF CUSTOMS, New York.

No. 22073.—CRUDE GUM TRAGACANTH.—Protest 367665 of Knauth, Nachod & Kuhne (New York).

Gum tragacanth, classified as a drug advanced in value or condition under paragraph 20, tariff act of 1897, was claimed to be free of duty under paragraph 548, relating to crude drugs. Protest sustained.

CHAMBERLAIN, General Appraiser: . . . It appears from the testimony that the gum is taken from the tree with hammers, that the pieces are of various sizes, all containing dirt and wood, and the article under consideration is the result of separating it from the larger pieces of gum. It is, furthermore, in the crudest form known to commerce. We find the merchandise to be a gum not advanced in value or condition, and hold it dutiable as claimed.

TRADE MARKS FOR REGISTRATION IN OUR BUREAU.

We have been petitioned to register the following trade mark. Any of our readers that have good reason to protest against the issuance of our Certificate of Registration under the common law should communicate with us before Jan. 1, 1910.

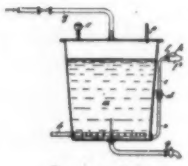
The registration of trade marks in our bureau will serve to establish the priority of the use of such trade marks in actual commerce by the applicant.

Serial No. 6.—Mutual Mfg. Co., Canton, Ohio.—(Filed Nov. 5, 1909.)—For perfumes, massage and toilet creams, toilet and face powders, tooth washes and pastes, depil-

Captina

atories, toilet waters, sachet powders, shampoo preparations, hair tonics, nail polish, liquid rouge and talcum powder.

PATENTS, TRADE MARKS, ETC.



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SNAP
39103

Wampum
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Nokomis
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XXX
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EUBELLINE
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Motor Club
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ROSEDALINE
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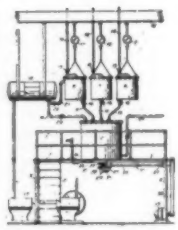

939906

RUB-A-LAC
41340

SUT-OL
42314

CUNO
42590

CUNO
42591

OTELLO
43245

BELLICOSA
43688

CHALLENGE
43670

44271

1620
44270

Matinee Violets
43835

PEARL
44295

44130

44324

CO-CAPSULIN
44494

ROMOLINE
44609

Prsole
44619

RHEXIA
44183

NOTE TO READERS.

This department is conducted under the general supervision of Samuel E. Darby, Esq., Patent and Trade Mark Attorney, 220 Broadway, New York, formerly Chief Clerk and Examiner, U. S. Patent Office. This report of patents, trade marks, labels and designs is compiled from the official records of the Patent Office in Washington, D. C. We include everything relating to the four co-ordinate branches of the essential oil industry, viz.: PERFUMES, SOAP, FLAVORING EXTRACTS and TOILET PREPARATIONS.

The trade marks illustrated are described under the heading "Trade Marks Applied For," and are those for which registration has been *allowed*, but not yet *issued*. All protests for infringement, etc., should be made promptly to the Commissioner of Patents, Washington, D. C.

All inquiries relating to patents, trade marks, labels, copyrights, etc., will receive Mr. Darby's attention if addressed to

PATENT AND TRADE MARK DEPT.,
Perfumer Pub. Co. 100 William St., New York.

PATENTS GRANTED.

939,431. HAIR TONIC. Friedrich W. E. Muller, Chicago, Ill. Filed Aug. 6, 1909. Serial No. 511,659.

1. A hair tonic consisting of water, an extract of ripe black currants, granulated sugar, best corn whisky and port wine, substantially in the proportions described and for the purpose specified.

2. A hair tonic, consisting of pure water 10 per cent., an extract of ripe black currants, 25 per cent., granulated sugar 5 per cent., best corn whisky 40 per cent. and port wine 20 per cent., substantially as described.

939,906. APPARATUS FOR MAKING SOAP. William A. Grant, East Orange, N. J., assignor to Royal Solvent Company, a corporation of New York. Filed Sept. 7, 1907. Serial No. 391,837.

1. In an apparatus for making soap, the combination of a converter having a discharge port in its bottom, means for controlling said port, a charging container above said converter and adapted to discharge thereinto by gravity, a valved duct leading from the bottom of said container to the top of said converter, a compressed air supply, ducts leading from said compressed air supply to the tops of said converter and container, respectively, and valves for said last-mentioned ducts.

2. In an apparatus for making soap, the combination of a converter having in its bottom a port adapted to discharge the contents of the container by gravity, means for controlling said discharge port, charging containers above said converter adapted to discharge thereinto by gravity, valved ducts leading from the bottoms of said containers to the top of said converter, a compressed air supply, ducts leading from said compressed air supply to the top of said converter and one of said containers, respectively, and valves for said last-mentioned ducts each independent of the other.

3. In a converter, the combination of a cylindrical body portion arranged with its central axial line vertical, an axial shaft in said converter, a diametrically disposed rectangular frame in said converter having its rim adjacent to the walls of the converter, arms on said shaft and frame, means for rotating said shaft and frame, means for charging said cylindrical body portion, a compressed air duct opening into the top of said cylindrical body portion adjacent to its curved walls, and a gate at the bottom of said cylindrical body portion also adjacent to its curved walls, said compressed air inlet and gate being at opposite sides of the path of the said rotary frame.

940,398. PROCESS FOR THE PRODUCTION OF SOAP POWDER. Wilhelm Lüring, Hanover, Germany, assignor to Gebrüder Körting Actiengesellschaft, Körtingsdorf, near Hanover, Germany. Filed Dec. 8, 1908. Serial No. 466,461.

1. A process for producing a powder from a hot high pressure liquid, consisting in spraying said liquid while maintaining the high pressure, and assisting the spraying and transmitting heat to the high pressure liquid by a hot gaseous fluid free from moisture introduced just at the point where the hot high pressure liquid begins to spray and expand.

2. A process for producing a powder from a hot high pressure liquid, consisting in spraying said liquid while maintaining the high pressure, and assisting the spraying and transmitting heat to the high pressure liquid by a hot gaseous fluid of lower pressure but free from moisture introduced just at the point where the hot high pressure liquid begins to spray and expend.

3. A process for producing a powder from a hot high pressure liquid, consisting in spraying said liquid while maintaining the high pressure, and passing an annular current of superheated steam of lower pressure than the high pressure liquid to join said high pressure liquid just at the point where the said liquid begins to spray and expand.

4. The improvement in the art of producing dry powder from a hot high pressure liquid by spraying said liquid while maintaining the high pressure, consisting in transmitting dry heat and assisting thereby the spraying by means of a hot gaseous fluid of lower pressure to the hot high pressure liquid at the point where said liquid begins to spray and expand.

5. The improvement in the art of producing dry powder from a hot high pressure liquid by spraying said liquid while maintaining the high pressure, consisting in transmitting dry heat and assisting the spraying by means of an annular current of superheated steam of lower pressure at the point where said high hot pressure liquid begins to spray and expand.

TRADE MARKS REGISTERED.

75,579.—Peanut Oil.—Naamlooze Vennootschap Nederlandsche Naamlooze Vennootschap Fransch-Hollandsche Oliefabrieken Nouveaux Etablissements Calvé-Delft, Delft, Netherlands.
Filed November 5, 1908. Serial No. 38,499. Published January 19, 1909.

75,597.—Toilet Preparations.—The C. B. Woodworth Sons Co., Rochester, N. Y.
Filed May 5, 1909. Serial No. 42,233. Published August 24, 1909.

75,613.—Preparation of Hydrogen Dioxid Used as an Antiseptic and Disinfectant.—The Oakland Chemical Company, New York, N. Y.
Filed June 4, 1909. Serial No. 42,828. Published August 24, 1909.

75,617.—Perfumes.—Colgate & Co., Jersey City, N. J., and New York, N. Y.
Filed June 19, 1909. Serial No. 43,116. Published August 24, 1909.

75,624.—Perfumeries.—Eugêne Moulié, Jacksonville, Fla.
Filed June 14, 1909. Serial No. 43,017. Published August 17, 1909.

75,628.—Hair Tonic.—Peter J. Schneider, Detroit, Mich.
Filed June 14, 1909. Serial No. 43,020. Published August 17, 1909.

75,629.—Antiseptic Powder.—Alexander Smith, New York, N. Y.
Filed June 8, 1909. Serial No. 42,903. Published August 17, 1909.

75,639.—Soaps for Toilet, Laundry, Shaving, and Household Use, and Soap Powder.—Colgate & Co., Jersey City, N. J., and New York, N. Y.
Filed June 19, 1909. Serial No. 43,117. Published August 24, 1909.

75,640.—Soaps for Toilet, Laundry, Shaving, and Household Use, and Soap Powders.—Colgate & Co., Jersey City, N. J., and New York, N. Y.
Filed June 24, 1909. Serial No. 43,234. Published August 24, 1909.

75,666.—Perfumery.—Geo. Borgfeldt & Co., New York, N. Y.
Filed June 8, 1909. Serial No. 42,905. Published August 31, 1909.

75,669.—Peroxid Cream.—Oxygen Products Company, New York, N. Y.
Filed January 30, 1909. Serial No. 40,264. Published August 31, 1909.

75,672.—Hair Dressing and Hair Tonic.—Jean Sénégas, New York, N. Y.
Filed May 26, 1909. Serial No. 42,688. Published August 31, 1909.

75,709.—Italian Olive Oil.—Alfred Servida, New York, N. Y.
Filed March 15, 1909. Serial No. 41,211. Published June 22, 1909.

75,713.—Peroxid of Hydrogen.—Custer Chemical Co., New York, N. Y.
Filed June 22, 1909. Serial No. 43,185. Published September 7, 1909.

75,756.—Olive Oil, Macaroni, Capers, Mushrooms, and Preserved Vegetables.—Von Bremen, Asche & Co., New York, N. Y.
Filed March 16, 1909. Serial No. 41,233. Published September 7, 1909.

75,767.—Mouth Washes and Toothache Medicines.—Karol Gruska, Chicago, Ill.
Filed June 28, 1909. Serial No. 43,312. Published September 14, 1909.

75,770.—Salves, Lotions, Face Creams, and Poison Oak Remedies, Finger Nail Gloss and Mange Remedies.—The Owl Drug Co., San Francisco, Cal.
Filed April 27, 1909. Serial No. 42,066. Published September 14, 1909.

75,771.—Perfumery.—Joseph Palazzolo, New York, N. Y.
Filed August 11, 1909. Serial No. 44,075. Published September 14, 1909.

75,795.—Toilet and Pumice Soaps.—Arthur C. Brown, New York, N. Y.
Filed February 23, 1909. Serial No. 40,739. Published August 10, 1909.

75,780.—Fingernail Polishing Compound. Curioso Dust Company, Los Angeles, Cal.
Filed February 16, 1909. Serial No. 40,565. Published August 10, 1909.

75,803.—Flavorings.—T. H. Grossmith, New York, N. Y.
Filed February 6, 1908. Serial No. 32,601. Published September 14, 1909.

(*Concluded on page 178*).

FOREIGN CORRESPONDENCE AND MARKET REPORT

FRANCE.

NICE.—Consul William Dulany Hunter will say in his annual report: "The year 1908 was not as prosperous as 1907 for the manufacturers at Grasse, which is the center of the perfumery industry. The condition of the market, however, is much improved at the present time, and the tendency is toward larger sales and higher prices. The reasons given by the manufacturers for the depression in their business during 1908 are the crisis in America, the competition in synthetic perfumeries, and the low prices of many imported articles, such as geranium d'Afrique, 20-22 francs (franc = 19.3 cents); geranium de Bourbon 19 francs; bois de rose femelle, 25 francs each per kilo; which can be used as substitutes for the more expensive Grasse articles of the same or similar kinds on which more profit is made. For the genuine and very fine products distilled or extracted from real flowers the Grasse manufacturers have practically a monopoly, and their supplies are widely distributed. For the very expensive violet concrete, which costs about $300 and upward per kilo kilo = 2.2046 pounds), a new substitute is prepared from the leaves of violets, and, though its odor is less delicate and less lasting than the articles prepared from the flowers themselves, its low price, $80 to $100 a kilo, makes it a very salable article. The methods by which the odor is extracted vary in the different distilleries, and in some cases the process is protected by French and foreign patents.

The exports of perfumery to the United States from this consular district for the first quarter of 1908 were $173,926, while those for the same period of 1909 amounted to $247,067. This indicates greater prosperity in this industry for the present year.

OLIVE OIL.

The declared value of exports of Nice olive oil, which is highly refined, to the United States during 1908 was $348,331, which, in the absence of official statistics of the value of exports to foreign countries, is estimated as about one-fifth of the value of exports of this commodity to all other countries. In 1907 the declared value of olive oil exported to the United States was $296,923. The partial failure of the olive crops in Spain and Italy, and the serious damage sustained by the olive trees by heavy snows in the mountains of this district during January and February last, will undoubtedly affect the prices of olive oil manufactured here during the present year, especially that of the higher grades, not only because the demand will be greater, while the supply is diminished, but because a considerable portion of the olives are of inferior quality, owing to the fact that they were prematurely gathered, and olives picked after early in March are almost the only ones that will produce oil of the very best quality. Several manufacturers state that, having in many cases arranged long in advance to deliver oils at stated periods and at certain prices, they can fulfill such obligations only with considerable loss to themselves.

The value of declared exports from this consular district to the United States during 1908 was $1,120,304, which was a decrease of $341,293 from 1907. Some of the items are almond oil, 1907, $11,016; 1908, $2,793. Olive oil, 1907, $296,923; 1908, $348,311. Other oils, 1908, $2,987. Perfumery, 1907, $1,082,810; 1908, $717,379.

GRASSE.—Our correspondent writes: "The latest news from Ascuncion confirms our assertion relative to the unstable condition of affairs in Paraguay. The insurrectional movement is nearly always in a latent state in that country. It does not follow, of course, that the oil of petit grain is tied to that condition of things in respect of its production, but it is nevertheless true that the manufacturers of that article are affected by the general feeling of insecurity. We desire to make a new contribution to the history of the oil of petit grain in retrospect. In a manuscript at the library in Lyons, 'Le Parfumeur Francais,' by Mr. Barbe, perfumer to the Prince of Harcourt, bearing the date 1693, we have found a preparation made by the distillation of the 'strong oil of orange or of petit grain,' which shows that this essence was in use among the perfumers at least a quarter of a century before the discovery by Farina.

"The market for oil of lavender is closed; up to the last moment belated buyers were very active and often unsuccessful. Holders of some lots which were not sold at the beginning of the harvest increased their price considerably. The qualities known as 'prima' have been very scarce and there is no more on the market. The last quotations show an advance; good lavenders have reached 25 to 28 francs per kilo."

TAHITI.

Consul Julius D. Dreher writes as follows from Tahiti on present conditions in the vanilla bean trade:

"French colonies produce fully half of the vanilla beans raised annually in the world. It is estimated that this colonial industry gives employment to 35,000 people. As the use of the chemical product called 'vanillin,' which is 100 times as powerful as vanilla, threatens the business of the planters of the beans, they have formed a syndicate with officers at 19 Rue Saint Georges, Paris, to urge upon the French Parliament the imposition of a heavy tax upon vanillin, which contains no vanilla at all. There are indications that this syndicate will be partially, if not wholly successful. Some idea of the importance of this tax to the planters of vanilla beans may be gained from the price at which this product is sold in Paris. Vanilla beans from the island of Reunion (or Bourbon), which are the best grown on French territory, were quoted on Aug. 14 at $2.37 a pound, those from Tahiti at $1.15 a pound, while the best Mexican beans were bringing $6 a pound."

ZANZIBAR.

Consul Arthur Garrels reports as follows on the yield of cloves for this season in Zanzibar, East Africa:

It is expected that the total clove production in the crop year 1909-10 will be considerably less than in the

crop year 1908-9. This forecast is based on the condition of the trees at the present time. Picking will probably begin in August and continue until January, part of the crop being early and part late. Clove deliveries for the 1908-9 crop amounted to 165,733 frasilas (frasila=35 pounds) for Zanzibar and 449,685 frasilas for Pemba, with average prices of 8.75 rupees (rupee=$0.3244) for Zanzibar and 8.31 rupees for Pemba per frasila.

THE DOMESTIC MARKET.

It is a peculiar fact that buying is freer in a rising or high market than in a falling or low one. This is again exemplified in the course of the essential oil market during the past two years. Geranium and lavender ruled at moderate prices but buying was slack and now that an advance has taken place there is more business being done.

The status of lemon oil has been definitely fixed, so far as the technical features are concerned, by Bulletin No. 46 of the Department of Agriculture and a rise in price may follow. The new crop of Messina essences promises to be a good one, though in strong hands, and taken all in all, prices are more likely to advance than to recede.

BEANS.

Advices from Mexico indicate a rise in the price of whole beans and cuts, largely because of a small crop. Whole beans are not likely to run much over six inches in length, and are said to be of no very good quality.

SOAP MATERIALS.

Tallow, city, .06⅝ (hhds.); country, .06¼.

Grease, brown, .05¼; yellow, .06.

Cottonseed Oil, crude, tanks, 5.93@6.08; summer yellow, prime, 6.70@6.80.

Cocoanut Oil, Cochin, .09½; Ceylon, .08⅜.

Olive oil, yellow, $1.40@1.50; denatured, 85@1.00.

Olive Oil, Foots, prime, .07⅛.

Palm Oil, Lagos, .06½; red, prime, .06⅛.

Chemicals, borax, .4½; caustic soda, 80 p. c. basis of 60 p. c., $1.90.

Rosin, per 280 lbs., $4.25@7.40.

Almond, Bitter.....per lb.....	$3.50
" " F. F. P. A.....	4.50
" Artificial	.75
" Sweet, True.....	.55-.60
" Peach-kernel	.30-.35
Amber, Crude.....	.13
" Rectified	.20
Anise	1.15
Aspic (Spike).....	1.35
Bay, Porto Rico.....	3.50
Bay	2.10
Bergamot, 35%-36%.....	3.75
Birch (Sweet).....	1.60
Bois de Rose, Femelle	4.50
Cade	.20
Cajeput	.53
Camphor	.12
Caraway Seed	1.30
Cardamon	18.00
Carvol	2.45
Cassia, 75-80%, Technical.....	1.00
" Lead free	1.30
" Redistilled	1.60
Cedar, Leaf	.50
" Wood	.25
Cinnamon, Ceylon.....6.50-12.00	
Citronella	.27
Cloves	.80
Copaiba	1.25
Coriander 6.00-13.00	
Croton	.75
Cubebs	2.75
Erigeron	1.70
Eucalyptus, Australian, 70%...	.50
" American	.60
Fennel, Sweet	1.20
" Bitter	.75
Geranium, African	4.00
" Bourbon	3.50
" French	11.00
Geranium, Turkish	$2.50
Ginger	4.50
Gingergrass	1.35
Hemlock	.55
Juniper Berries, twice rect.....	1.30
Kananga, Java	4.00
Lavender, English	7.00
" Cultivated	2.75
" Fleurs, 28-30%	2.50
Lemon	.85
Lemongrass	.85
Limes, expressed	2.00
" distilled	.80
Linaloe	2.90
Mace, distilled	.80
Mustard, natural	4.10
" seed, gen.....	8.50
" artificial	2.00
Myrbane, rect.	.12
Neroli, petale.....80.00-90.00	
" artificial	17.00
Nutmeg	.90
Orange bitter	2.25
" sweet	2.15
Origanum	.40
Orris Root, concrete ....(oz.) 3.50-4.50	
" " absolute 28.50-32.00	
Patchouly 4.75-5.50	
Pennyroyal	2.00
Peppermint, W. C.	2.00
Petit Grain, American.....	4.50
" " French	6.00
Pimento	2.25
Rose .....(oz.) 5.00-5.50	
Rosemary, French.....	.80
" Trieste	.70
Safrol	.50
Sandalwood, East India.....	3.50
Sassafras, artificial	.35
Sassafras, natural	.60
Savin	$1.40
Spearmint	1.75
Spruce	.45
Tansy	3.50
Thyme, red, French.....	1.10
" white, "	1.30
Vetivert, Bourbon	8.50
" Indian	42.00
Wintergreen, artificial	.38
" genuine	4.25
Wormwood	5.00
Ylang-ylang 50.00-65.00	

BEANS.

Tonka Beans, Angostura.....	1.25
Surinam	.55
Para	.50
Vanilla Beans, Mexican 4.00-5.00	
" " " Cut ...	3.00
" " Bourbon	3.75
" " Tahiti	1.00

SUNDRIES.

Ambergris, black .....(oz.)	20.00
" gray..... "	25.00
Civet, horns ..... "	1.75-1.85
Cologne Spirit 2.64-3.25	
Cumarin	3.30
Heliotropine	1.85
Musk, Cab., pods.....(oz.)	8.00
" " grain ..... "	15.00
" Tonquin, pods..... "	18.00
" " grain..... "	22.00
" Artificial, per lb.....	1.50
Orris Root, Florentine, whole	.10
Orris Root, powdered and granulated	.13
Talc, Italian 01½-.01¾	
Terpineol	.35-.45
Thymol	1.85
Vanillin .....(oz.)	.33-.35

TRADE MARKS REGISTERED.

(*Concluded from page 175.*)

75,806.—Flavoring Extract.—Lee B. Jordan, New Orleans, La.

Filed May 17, 1909. Serial No. 42,475. Published September 14, 1909.

TRADE MARKS APPLIED FOR.

39,103.—Robert S. Tyus, Montreal, Canada. Filed Dec. 4, 1908.—A Chemical Mixture for Hand or Skin Cleansing Purposes.

39,560—39,562.—Stone-Ordean-Wells Co., Duluth, Minn. Filed Dec. 28, 1908.—Cotton-Seed Oil, Olive Oil.

40,282.—Michael O'Hegan, Butte, Mont. Filed Feb. 1, 1909.—A Hair Restorer.

40,926.—The M. A. Liotta Chemical Co., New York, N. Y. Filed March 3, 1909.—Hair Tonics.

40,936.—Coralene Curative Co., Boston, Mass. Filed March 5, 1909.—Toilet Emolients.

41,115.—Joseph P. Urben, Pittsburg, Pa. Filed March 11, 1909.—Salve for Face, Chapped Hands and Burns.

41,216.—Richard J. Moore, New York, N. Y. Filed March 16, 1909.—Foot Powder.

41,340.—Rub-A-Lac Manufacturing Co., Glouster, Ohio. Filed March 22, 1909.—Washing Compound.

42,314.—Niagara Chemical Co., Buffalo, N. Y. Filed May 8, 1909.—Hair Tonic.

42,590.—C. F. Sauer, Richmond, Va. Filed May 21, 1909. Tooth Powder, Tooth Paste, Talcum Powder, etc.

52,591.—C. F. Sauer Co., Richmond, Va. Filed May 21, 1909.—Flavoring Extracts of Lemon, Vanilla and Peppermint.

43,245.—Joseph Palazzolo, New York, N. Y. Filed June 25, 1909.—Perfumery and Hair Tonic.

43,688.—The Arabol Mfg. Co., New York, N. Y. Filed July 22, 1909.—Soap Powder in Highly Concentrated Form Used for Softening Purposes in Connection with Textile Materials.

43,670.—F. S. Walton Co., Camden, N. J. Filed July 21, 1909.—Neat's Foot Oil Soap for Tanners' Use.

43,835.—The J. B. Williams Co., Glastonbury, Conn. Filed July 28, 1909.—(Consists of the words "Matinee Violets.")—Soap.

44,130.—Armstrong Packing Co., Dallas, Texas. Filed Aug. 13, 1909.—A compound of Oleostearin and Cotton Seed Oil.

44,295.—Tennessee Packing & Stock Yards Co., Nashville, Tenn. Filed Aug. 23, 1909.—A Compound Composed of Cotton Seed Oil, Oleostearin and Beef Fat.

44,494.—The Cudahy Packing Co., Chicago, Ills. Filed Sept. 2, 1909.—An Astringent and Antiseptic.

44,609.—Hutzler Brother Co. of Baltimore City, Baltimore, Md. Filed Sept. 9, 1909.—An Antiseptic Solution for External and Internal Use.

44,270.—William C. Hathaway, Kingston, Mass. Filed Aug. 21, 1909.—Soap.

44,271.—William J. Scherer, Rochester, N. Y. Filed Aug. 21, 1909.—(The picture being that of applicant's daughter Gertrude.)—A Liquid Compound for Treating the Scalp and Hair.

44,324.—Phillip Wm. Hessberg, Richmond, Va. Filed Aug. 24, 1909.—Talcum Powder.

44,619.—John F. Schultz, Baltimore, Md. Filed Sept. 10, 1909.—Face Balms.

45,183.—Oliver T. McKeever, Allentown, Pa. Filed Oct. 7, 1909.—Hair Tonics.

THE OLIVE OIL SITUATION ABROAD.

(*Concluded from page 167*).

could not control this method of extraction, he confined himself to the remark that, owing to the presence of the strainer, the vacuum obtained could not exceed a pressure of a killogramme to the square centimeter, while the hydraulic press gives a pressure twenty (20) times as great. According to the inventor of this method, about 40 per cent. of the oil is obtained by a first operation; a second extraction with hot water gives the remainder.

AGAINST FRAUD IN OLIVE OIL.

On the 25th of June, 1908, as the result of a vote in the Parliament, a law was enacted having for its object the suppression of fraud in olive oils. The law was received with enthusiasm by the dealers in oil in the Department of the Alpes-Maritimes, but unfortunately, in so far as it concerns olive oil, the law had an effect directly the opposite of what was expected. It contains a paragraph which tends only to legalize fraud by authorizing the sale, under the title of table oils, or comestible oils, of cottonseed, peanut and poppyseed oils under the generic name of seed oils (huiles de graines).

At the time of the Pure Food Convention the delegates who represented the oil industry and olive culture from the Maritime Alps registered the wish that comestible oils might be designated under the specific descriptive names employed by the trade. In spite of a lively struggle their proposal was defeated.

The question was lately submitted anew to the Congress of the White Cross (Croix Blanche), but there again the merchants were defeated by the manœuvres of a party absolutely opposed to the idea.

The delegates from the Maritime Alps protested loudly, asserting that as a matter of fact their antagonists sought to belittle the question by representing it to be a struggle between two classes of merchants, while it ought properly to be looked upon from a higher point of view as a matter of international importance. As a matter of fact, said they, Italy, Spain, Portugal, Greece, Turkey and the Ionian Islands have quite as much interest as France in giving a precise definition to these oils in order to avoid all equivocation or possible error on the part of the consumer.

Certainly it is proper to emphasize the fact that in certain regions seed oils are used almost exclusively for table purposes; but it is important that the methods of a combination which sells any kind of seed oil whatever at the price of pure olive oil should not come into general practice. Customers are of course in error in allowing themselves to be imposed upon, but they should be taught, they should be informed of the trickery of which they are often the victims.

The representatives of the oil industry from Nice, justly aroused, have organized themselves into a syndicate for the purpose of putting a stop to the unfair competition from which the olive oil industry in that section suffers. Among the different groups which have been formed for this purpose of protesting, and which have struggled most valiantly in the movement, may be mentioned the "Syndicat du Commerce des Huiles d'Olive de Nice," presided over by Mr. Felix Magrarkue; the "Syndicat de Defense du Commerce des Huiles d'Olive de Nice," presided over by Mr. Dunan, and the "Syndicate National de défense de l'oleïculture française," of which the section of the Maritime Alps is presided over by Mr. Alexandre Durandy, conseiller général. These gentlemen are personalities in the local business world, and we could mention many others. We wish them success in the new crusade which they have undertaken.

CLASSIFIED ADVERTISEMENTS.

On account of our wide circulation among manufacturers, dealers, importers, etc., of perfumery, soaps, toilet specialties, flavoring extracts, etc., our readers will find this column a quick and satisfactory means for advertising temporary matters. To display advertisers and regular subscribers this service is free; all others 25c. per line per insertion. Cash with order. Address all communications to

PERFUMER PUB. CO., 100 William St., New York.

BUSINESS OPPORTUNITIES.

IMPORTED LABELS for perfumers; exquisite designs; samples on request. Box 115, Merchants Station, St. Louis, Mo.

SALESMAN WANTED for an essential oil house. State experience, salary desired, etc. Address, in absolute confidence, Box 199, care of this journal.

WANTED.—A small hand-power toilet soap press; new or second-hand; such as illustrated in Piesse's "Art of Perfumery." DR. HORATIO S. KELLEY, druggist, West Dennis, Mass.

WANTED.—Sales Agents to handle our high-grade perfume composoils and concentrates. Principal or side line. Liberal commissions, exclusive territory to right parties. METZGER CHEMICAL COMPANY, 164 Front Street, New York.

WE are specialists in the manufacture of nail polish in cake form. Any size or shape and superior polishing efficiency. Also full line of manicure preparations. Samples and quotations cheerfully furnished. ALEXANDER CHEMICAL CO., 131 West 24th street, New York City.

AGENTS WANTED.—Remunerative: handle Allen's Royal Talcum, Tooth and Foot Powders, and Royal Shaving Stick. At stores, or mail, 15 cents. Send 50 cents for sample outfit and "Terms to Agents." ALLEN PHARMACAL CO., Plainfield, N. J.

SALESMAN to handle Flavoring Extracts as side line. Commission. ELLINGER & CO., Post Office Box 2892, Philadelphia, Pa.

A SALESMAN traveling Pacific Coast visiting wholesale druggists, perfumers, confectioners, etc., wants Eastern lines for those trades. A. D. W. STICKLAND, Syracuse, N. Y.

POMADE WASHER.—Don't want to move it to our new factory; a great bargain where one does not need a larger; it is in first-class condition; $100 will buy it if sold before we move; capacity 150 to 200 lbs. Pomade, can wash six odors at once. FREEMAN PERFUME CO., Cincinnati, Ohio.

A FIRST CLASS OPENING for a first class extract man. We want an assistant manager and chemist in our extract department; our output is large and we need a good man. Write fully, stating age, education, experience and salary desired. All letters treated confidentially. Address EXTRACT, care of this Journal.

THE field for good concentrates is constantly growing. We make a full line of high grade goods, and have openings for exclusive territory to good houses that will push the sale, or to good salesmen who desire a productive side line. Also full line of synthetics and natural oils. DUCAS & CO., 50 Church St., New York.

SITUATIONS WANTED.

ATTENTION MANUFACTURER.—For line representation on Pacific Coast, write Chas. H. Adler, 227 Lumber Exchange, Portland, Oregon.

WANTED—A position as food and drug analyst. Have had training and experience, and can furnish references. Address E. S. R., care of this journal.

YOUNG MAN is looking for a position to manufacture a fine line of toilet preparations and perfumes. Ten years' reference. B. G., care of this Journal.

COMPETENT CHEMIST, who is a technical graduate of 8 years' experience with essential oils and in the manufacture of perfumes, toilet preparations, &c., desires to make a change. Age 24; single. Salary $25 per week. Address X, Box 123, care of this journal.

AN EXPERIENCED PERFUMER, skilled in the compounding of concentrates for perfumes, toilet preparations, etc., is open for engagement. Address M. A., care of this journal.

POSITION WANTED—Manager of manufacturing department for a wholesale grocery or specialty house. Thoroughly experienced with all details of the business. Clearly understands how to buy, make and market. Address Chemist, care of this journal.

PERFUMER, experienced in all kinds of perfumes, toilet preparations, flavoring extracts, etc., is open for engagement. Can make the new style alcohol-free perfumes. Address Sun Robin, care of this journal.

EXPERIENCED perfume chemist is willing to sell his formulas for perfumes, toilet preparations and flavoring extracts; they include many foreign and domestic specialties. Address CONFIDENTIAL, care of this journal.

PERFUMER and chemist of good training and experience is open for a position. Address K. S., care of this journal.

POSITION WANTED.—Experienced factory manager, well versed in details of economical production and with practical working knowledge of the manufacture of high-grade perfumes and toilet preparations, desires to locate with progressive house. References furnished. Address MANAGER, care of this journal.

YOUNG PERFUMER, expert in manufacturing all perfumes, creams, toilet goods, drug and medical preparations and flavoring extracts wants position; 8 years' experience. Address K. S., care of this journal.

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